JUNE, 1957 2s. 3d.

Personnel Management & Methods

WELFARE · SAFETY · HEALTH · CANTEEN · EFFICIENCY AIDS

Telling Workers about the Firm's Money
(see page 19)

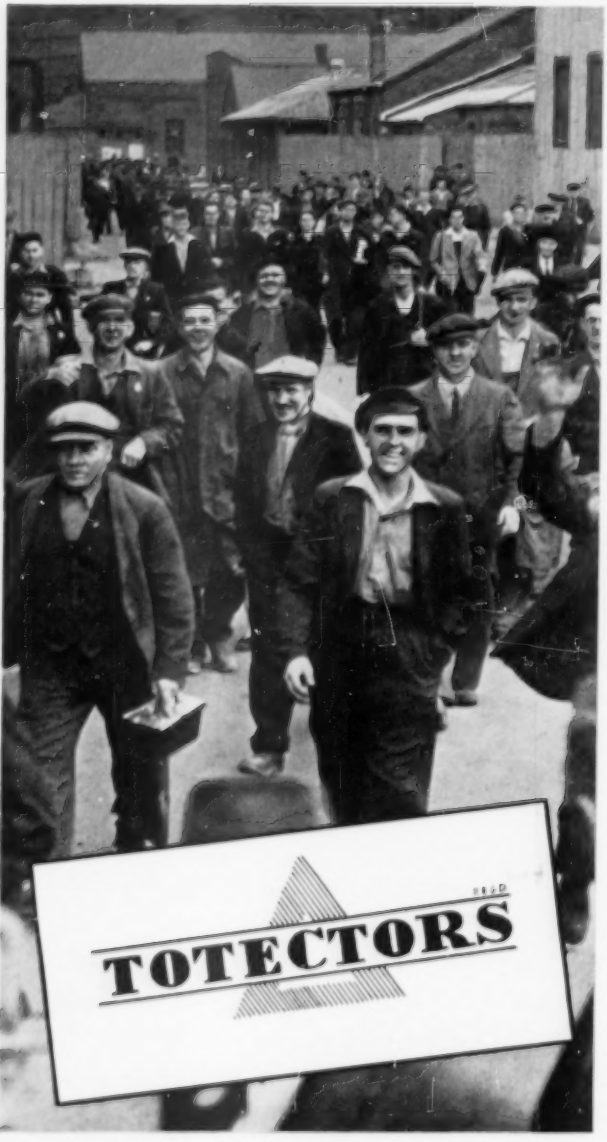
★

Electronics Choose New Staff
(see page 22)

★

A New Training Tool for Industry
(see page 30)

Who foots the bill for foot injuries in the factory?



ASKS MASTER TOTECTOR

The answer is, of course, the employer. For every casualty laid up with foot injury means a loss in man hours and output. Avoid this liability by instituting the use of *TOTECTORS* Safety boots and shoes. Tough yet comfortable in wear, they have a *concealed steel toecap capable of withstanding a dead weight of 3 tons.* Safety and Welfare Officers are invited to apply for full details.

All genuine *TOTECTORS* brand Footwear carries the Registered Trade Mark and "Safety First Tag".

SAFETY BOOTS AND SHOES

Illustrated brochure and price list on request to Dept. PM

WILKINS & DENTON LTD

51-52 WOBURN PLACE, LONDON, W.C.1

"Wheelers of Plaistow"

specialists in the manufacture of

OVERALLS

for

MEN

and

WOMEN

in every Trade

The "VOLE" Brand DIGNIFIES THE JOB

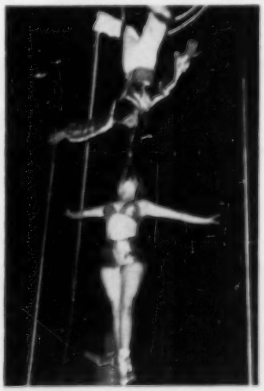
H. WHEELER & CO. LTD.

Overall Clothing Manufacturers

107 LONDON RD., PLAISTOW, E.13

Telephone: GRAngewood 4071

"BY THE SKIN OF HIS TEETH"



THE FOUR MONSANTOS

present a daring and thrilling display of Neck and Dental Spins on the High Trapeze

IT'S NOT TOO LATE

To arrange an attraction for your Sports Day or Gala

Write for details of our comprehensive service:

MURRAY-WARD PRODUCTIONS

38 Demesne Road, Whalley Range

MANCHESTER, 16. *Tel. Ardwick 1997*

Everything for your Sports Day, Gala, Concert, Dance or Children's Party, etc.

"STAR" ATTRACTIONS OUR SPECIALITY

Personnel Management & Methods

WELFARE · SAFETY · HEALTH · CANTEEN · EFFICIENCY AIDS

JUNE 1957

▶ POINT-COUNTER-POINT 13

▶ WHEN IT'S A MATTER OF MONEY — David Judge 19

What employees want to know about the firm's money matters and how to present the facts and figures

▶ ELECTRONIC SELECTION — Robert McKinnon 22

Account of an electronic apparatus now being used in the U.S.A. to screen candidates for vacancies

▶ THE TIME-SPAN IS ACCURATE — Elliott Jaques 24

The man who measured job responsibility defends his revolutionary theory of wages and salaries

▶ NEW TRAINING TOOL FOR INDUSTRY — G. O. Sutherland 30

Describes some of the applications to which the stroboscope is now being put in technical training

▶ TWO FOR ONE PLUS MULTIPLE MANAGEMENT — Discussion Leader 33

Case history of a firm with some novel ideas on working atmosphere and executive development

▶ THAT LITTLE CATERING EXTRA — Winifred McCullough 39

Reviews some of the facts and trends behind any extra canteen service for executives and staff

News & Readers' Service

Management News and Ideas 28
People at Work 36
New Books — New Films .. 43
Management Diary 45
Summary of Official Publications 45

NEW EQUIPMENT

Guide for Personnel Executives 47

EFFICIENCY AIDS ★ GOOD HOUSEKEEPING ★ WELFARE
SAFETY ★ CANTEEN

VOL. 23, No. 204. Printed for the Proprietors, Skaw Publishing Co. Ltd., *registered office: 180 Fleet Street, London, E.C.4, England (Waterloo 3388)*, by Samuel Temple & Co. Ltd., 271b King Street, London, W.6.

Advertisement, editorial and sales offices: Mercury House, 109-119 Waterloo Road, London, S.E.1 (Waterloo 3388). Subscription 30s. per year, post free.

CHANGE OF SUBSCRIBER'S ADDRESS. Please inform the Publishers six clear weeks in advance and include present address as well as new address required.

BE THE BOSS'S RIGHT HAND MAN!

Are the gloves you're wanting now all right?
Then tell your boss he need not fidget
There'll not be one pair left in sight
If he provides you with those "Double Digit"

. . . ★ Double Digit . . .

The DOUBLE DIGIT D.D.4 is a reversible chrome leather glove for use on either hand, one of the extensive range of "EVERTRUSTY" Industrial gloves. The complete range includes a glove for every purpose.

Members of the Royal Society for the Prevention of Accidents.

Specialists in Industrial Safety

WALLACH BROS. LTD.

For over 70 Years

EVERTRUSTY

MANUFACTURERS OF INDUSTRIAL GLOVES AND PROTECTIVE CLOTHING

49 TABERNACLE STREET, LONDON, E.C.2 Tel.: CLErkenwell 1448 9 Grams.: Hammerman, Ave., London

THESE AIR-DRY "SIEBER" HANGERS ARE A TREAT

Locking Basket and other types of Hanger to suit individual requirements, fully meeting the New Factory Act.

"At last I can change into dry, uncreased clothing when I go home! It's plain common sense to hang rain-soaked 'togs' on a 'SIEBER' Hanger instead of bundling them into an unventilated, smelly locker. It saved me from many colds and my clothes are fresh and wear better. The boss, too, must like these 'SIEBER' Hangers because they reduce absenteeism and the space he saves is bound to repay the little money they cost. Repair costs? Not on your life, because this Hanger Equipment is made to last for good and all."

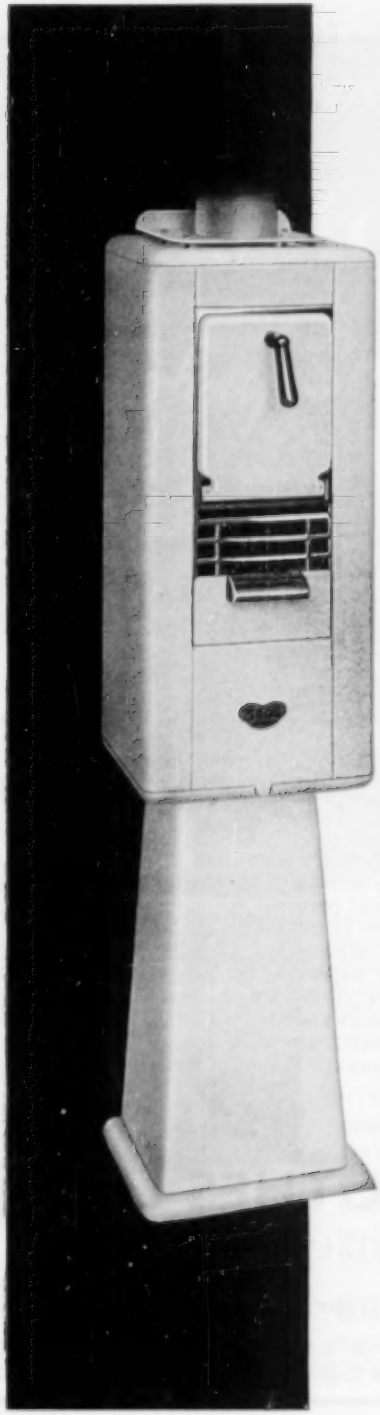
Pat No. 415653
Des. Reg. No. 789558

SIEBER

ALL—IN—ONE HANGER EQUIPMENT

Permanent Exhibit at Health and Safety Centre, London, S.W.1.
Installed in Factories, Offices, Public Undertakings, Schools, Hospitals, etc.
Write today *for full details of our Free Planning Service.*

JAMES SIEBER EQUIPMENT CO. LTD., 30 Africa House, Kingsway, London, W.C.2. Tel.: HOL 4531 & 5121



Safeguard Public Health Encourage Personal Hygiene

in FACTORIES · HOSPITALS · CLINICS SCHOOLS · HOTELS AND OFFICES

Investment by British industrialists and others in modern equipment to safeguard the health and welfare of the vast and growing numbers of workers, has proved beyond doubt the wisdom of a policy both far seeing and democratic in concept.

The installation of Sugg's incinerators wherever women employees form part of an organisation is plain commonsense.

Our sales and technical staff will be glad to advise and co-operate.

The Sugg Incinerator

Gas-Fired

WILLIAM SUGG & CO. LIMITED
(Incorporating Cowper Penfold & Co. Ltd.)
VINCENT WORKS, REGENCY ST., LONDON, S.W.1 Tel.: VIC 3211

SUGG
WESTMINSTER

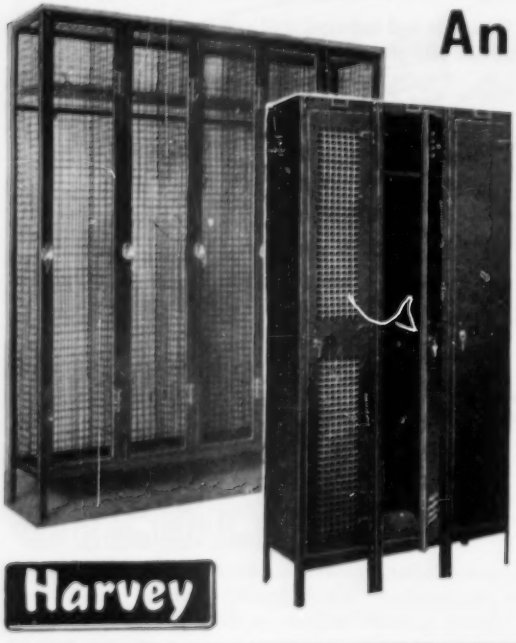
In modern hospitals such as this where kitchen floors must be kept in an immaculate and hygienic condition the 'MALLARD' Scrubber is the perfect answer. A quick change of brushes and the same machine can be used as a highly efficient polisher for parquet and wood block flooring.

Photograph by courtesy of St. Helier Group Hospital Management Committee

DESIGNED AND MANUFACTURED BY

Cimex-Fraser Tuson Ltd.

25/27 CRAY AVENUE, ORPINGTON, KENT



Harvey

An Important Amenity

Friction between employees and confusion at going-home time may be avoided by providing separate receptacles for clothes and personal belongings. Such provision is also important in the matter of hygiene. 'Harco' Clothes Lockers provide the answer. They are made in sheet metal or wirework, in nests of up to five in one unit, with short or full-length compartments as required. Steel lockers are fitted with 6-lever locks which can differ up to 1,600; wirework lockers carry hasps and fasteners for padlocks. Height of both types is 72 ins.

'HARCO' CLOTHES LOCKERS

IN WIREWORK OR SHEET METAL

Please ask for Lists PMT960 and PMT879

G. A. HARVEY & CO. (LONDON) LTD.
Woolwich Road, London, S.E.7 GREenwich 3232 (22 lines)

RICHARD THOMAS & BALDWINS LTD.,

use

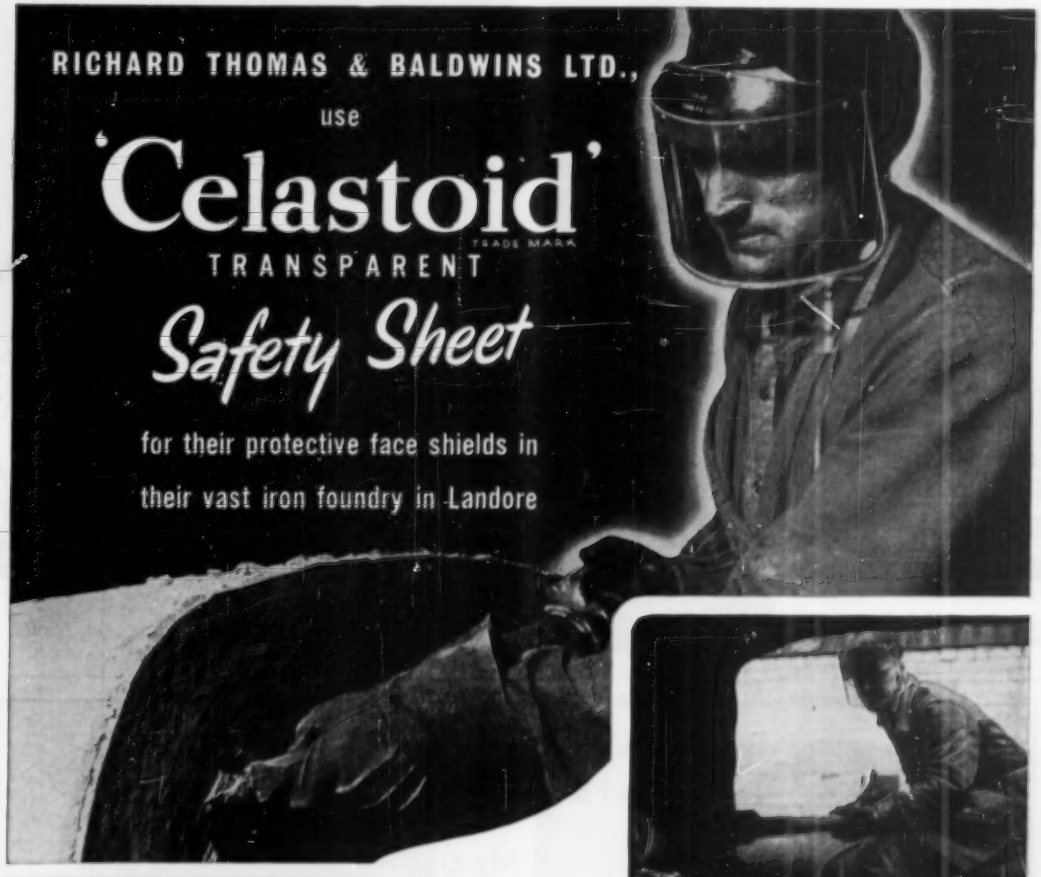
'Celastoid'

TRADE MARK

TRANSPARENT

Safety Sheet

for their protective face shields in their vast iron foundry in Landore



Operating a pneumatic grinder for the removal of metallic scale from the inside of Ingot Mould Casting.

ABOVE
Operating a pneumatic chisel for the removal of metal fins from an Ingot Mould casting.

Cleaning out Slag Tap-hole of a Cupola Furnace used for the melting of Pig Iron.

'Celastoid' transparent safety sheet is crystal-clear. It is tough. It is shatterproof. It has just those qualities that make it the choice of men who have to work close to danger in perfect safety. It moulds easily to shape. For visors, for goggles, for machine-guards, for protective sheeting of all kinds, 'Celastoid' has proved it can take it.

The three face shields illustrated are made by Safety Products Ltd.

BRITISH CELANESE LIMITED

Plastics Division, Celanese House, Hanover Square, London, W.1

All workers in mines, steelworks, foundries, on engineering projects and agricultural work who wear Commando Soles and Heels—and there are literally hundreds of thousands who do—appreciate their sure grip and outstanding wear.
For the SAFETY of all the men and women under your care specify Commando Soles and Heels . . . they'll stand up to the most rigorous conditions in heavy industry.

Commando
Registered Trade Mark
SOLES AND HEELS

AN **ITSHIDE** PRODUCT

Itshide Rubber Co. Ltd., Petersfield, Hants.

IT416

JELTEK PROTECTIVE CLOTHING

Old Bert says—

"My Guv'nor knows how to keep us blokes warm and dry in bad weather."

Bert's employers indeed know from experience the best, most economical way of keeping their men adequately protected against adverse weather conditions. That's why they always specify 'JELTEK' Protective Clothing.

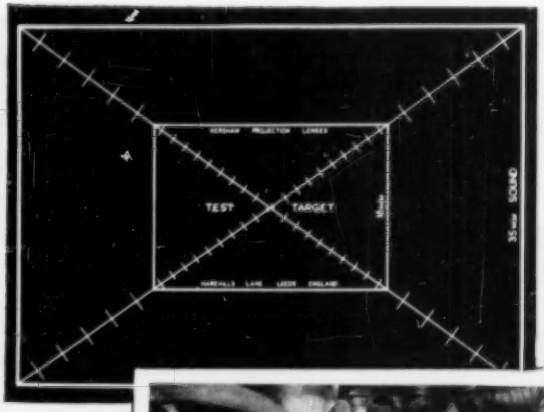
Manufacturers and Distributors of P.V.C. and Oilskin Clothing, Donkey Jackets, Duffle Coats, etc.

THE CIRCLE OF SERVICE

J. E. LESSER & SONS LTD.
GREEN LANE • HOUNSLOW • MIDDLESEX

HOUNSLOW 7283/7

THE CIRCLE OF SERVICE



BRILLIANCE and DEFINITION with the HI-LYTE '300'

BLOWER COOLED SLIDE AND STRIP PROJECTOR

Tested by craftsmen of Rank Precision Industries using the most modern scientific methods, of which the Test Target is symbolic, the Hi-lyte '300' possesses all the features necessary to screen your transparencies with superb brilliance and definition—plus the protection afforded by highly efficient blower cooling.

- **Screen Brilliance** *300 watt illumination and matched optical system*
- **Diamond cut definition** *4" f/2.8 anastigmat lens*
- **Protection for valuable slides** *powerful blower cooling*
- **Sturdiness plus handsome appearance** *die cast body and modern styling*
- **Non T/V interference motor** *(A.C. Mains)*

The VISTAMATIC magazine slide carrier gives you uninterrupted programmes of slide viewing. Capacity 30 slides. Price, with one magazine **£5.15.0.**

Most photographic dealers stock and will gladly demonstrate it to you.

RANK PRECISION INDUSTRIES LIMITED

CINE & OPTICAL DIVISION · DEPT. PM/6/57 · 37-41 MORTIMER STREET · LONDON · W.1 · MUSEUM 5432

PRICE complete with slide carrier and 300-watt lamp

£21.4.3

To remind you . . .

that **if you have a vacancy to fill,** junior or senior, skilled or unskilled, you should get in touch with the Officers' Association. This organisation is an Employment Bureau, and it has on its books much promising material. If the Officers' Association introduces a man, you may be sure that he is a candidate of complete integrity, potentially suited for that particular job, and well worth interviewing.

Next time you have any vacancy whatsoever, why not first try the Officers' Association? Ring them at **Abbey 2556** or write to **Dept. P.3, The Officers' Association, Windsor House, Victoria Street, London, S.W.1.**

Superb ENTERTAINMENT for your Workers

FILMS 16mm. SOUND

More than 50 Outstanding Productions and Classics from many countries : with English sub-titles where dialogue is in a foreign language.

Our NEW Catalogue with detailed information on each film is ready NOW.

FREE on request from

FILMS de FRANCE LTD.

48 Dover St., W.1 (Phone : HYD 8866)

ELIMINATE YOUR BIRD PESTS

Consult :

N. EDWARDS & COMPANY

56 TORRINGTON PARK,

FINCHLEY,

LONDON, N.12

Telephone : HILLside 2284

Leading specialists in the extermination of pigeons, sparrows, etc.

Satisfaction guaranteed

THE LIABILITY IS YOURS

Slippery floors are dangerous and unnecessary. All who hold positions of responsibility in buildings where floors are polished, whether wood, linoleum, stone, tile or rubber, should insist that a *non-slip* polish is used.

Accidents can prove costly and all measures taken to prevent them are steps to better welfare.

FURMOTO

***NON-SLIP* FLOOR CREAM**

is sold in ¼, ½ and 1 gallon tins and 5 gallon drums

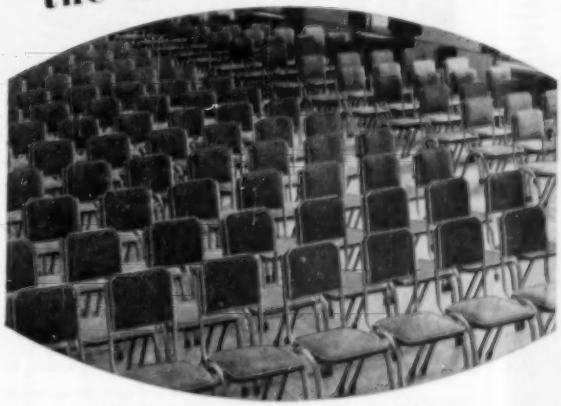
Sole Manufacturers :

FURMOTO CHEMICAL CO. LTD.

1-3 BRIXTON ROAD, LONDON, S.W.9

Steel Style
FURNITURE

the answer to your equipment problems



CONTRACTORS TO THE ADMIRALTY AND MINISTRY OF WORKS

We illustrate an assembly hall of a National Coal Board Welfare Institute which we were privileged to furnish. These excellent chairs are sure of a long life. They stack easily, leaving the hall free for other uses. In the Hospital, Industrial and Social Services fields, the name Steel Style is well known for good tubular steel furniture—rather better than most. Purchasing Officers are invited to see Steel Style now—or send for a catalogue.

A SERVICE TO EXISTING CANTEENS

Table tops of Formica and Warerite can be supplied to you in a variety of shades, ready for fitting to existing equipment.

New Equipment LIMITED

4, CROXDALE · COUNTY DURHAM

TEL.: SPENNYMOOR 2246/7

Teepol distributors | **Stephenson Clarke Ltd.,**

8 GREAT TOWER STREET · LONDON · E.C.3

Telephone: Mansion House 3270

A SHELL PRODUCT

Made by SHELL, Teepol is the most versatile and economical of modern detergents for every cleaning need. For particulars of the most convenient and economical way to buy Teepol and for prompt nation-wide delivery service telephone the nearest Office of: **Stephenson Clarke Limited**

TELEPHONE FOR SERVICE

BIRMINGHAM Tel. Edgbaston 2952 **BLYTH** Tel. 767 **BRISTOL** Tel. 36841
CARDIFF Tel. 28011 **GLASGOW** Tel. City 7941 **GRIMSBY** Tel. 4272
HULL Tel. Central 15755 **IMMINGHAM** Tel. 380 & 341
LIVERPOOL Tel. Central 7161 **MANCHESTER** Tel. Moss Side 3385
MIDDLESBROUGH Tel. 43072 **NEWCASTLE** Tel. 22184
NOTTINGHAM Tel. 63351 **SEAHAM HARBOUR** Tel. Seaham 2187
SHEFFIELD Tel. 24378 **SUNDERLAND** Tel. 57547 **SWANSEA** Tel. 52183

Send this coupon for details to:— **STEPHENSON CLARKE LIMITED**
8 Great Tower Street, London, E.C.3.
Please forward full literature and price list of "TEEPOL".

NAME .....

ADDRESS .....

DEPT. P.M.

SAFETY AND SERVICE

H.G.BENNETT & CO. GLOVES LTD.

LIVERPOOL 23

WATERPROOF FIRST AID

Waterproof First Aid Dressings are intended for use when a wound is exposed to water, or contamination from oil, dirt, etc. and also where necessitated by hygienic requirements.

Illustrated is our most popular assortment of such dressings (Adaptopruf No. M207) consisting of 114 adhesive plasters of five different sizes. Each has a dressing pad of soothing, quick healing Euflavine, a most effective medicament equally for wounds and burns.

Whenever a waterproof plaster is not essential we recommend Adaptoplast First Aid Dressings be used.

PIONEERS OF INDUSTRIAL FIRST AID

A PRODUCT OF Curson, Gerrard & Co Ltd. OLDBURY BIRMINGHAM

Established 1878
'Phone
BROadwell 1355

Patent No. 479,807
Registered Design No. 919,509

Protect your workers adequately from dust and mist inhalation. Light and comfortable. Fit everybody perfectly. Weight ¼ oz. Allow free breathing, clear vision, use of goggles, free speech. The workers will wear them whether watched or not. Reduce absenteeism. Do not cause perspiration or skin irritation. Always clean because pad is easily replaced.

Have given satisfaction for over 25 years and are the standard by which other lightweight masks are judged.

Send 3/3 for Mask and 6 refills (Trial Sample) to

MARTINDALE PROTECTIVE MASK

MARTINDALE ELECTRIC CO. LTD.,
41 Westmorland Road, London, N.W.9
also at 25 Elmbank Street, Glasgow, C.2

SPORTS PAVILIONS?

choose PEEL'S first-to last

for a Peel Pavilion is the permanent answer to all your accommodation problems — Sports and social—providing ample changing facilities for both home and visiting teams, and a pleasant, well-lit hall for entertainment. (If required, special thermal linings can be supplied to give extra warmth).

Solidly built from NEW timber, PEEL Pavilions are available in standard designs, or can be built to suit individual requirements. Our design team is at your service.

FREE DELIVERY within 200-mile radius.

Send for the complete catalogue and price list, or ask our Representative to call.

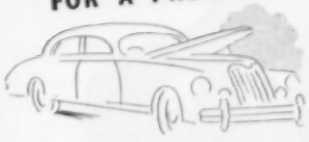
PEEL'S Sectional BUILDINGS

H. PEEL LTD., Dept. P.M.M., Mearclough Works, Wakefield Rd., SOWERBY BRIDGE, Yorks. Telephone: HALIFAX 81211

2864a/PEL

choose
FAITHFUL
BRAND
industrial overalls

CRAFTSMAN MADE FOR A PRECISION JOB



BOILER SUITS
BIB & BRACE OVERALLS
WAREHOUSE COATS

ALL TYPES OF PROTECTIVE CLOTHING

obtainable from

NICHOLLS & CO. (Chiswick) LTD.

281 Sandycombe Road, Richmond, Surrey. Tel. RIC. 3477

The Bunnie Incinerator for

HYGIENE IN PUBLIC PLACES

The Bunnie Incinerator is clean and efficient in use; and its attractive design and finish make it specially suitable for installation in factories, offices, hotels, restaurants, public toilets, hospitals, nurses' homes, etc. The patented fan device ensures the complete absence of smell and fumes. Automatic timing gives simplicity of operation. Residual ash is deposited in ash-drawer for later disposal. No maintenance is required.

Please write for full particulars to:—Dept. PMM 1

Wandsworth

MANUFACTURERS OF ELECTRICAL ACCESSORIES

THE WANDSWORTH ELECTRICAL MFG. CO. LTD.

Albert Drive, Sheerwater, Woking, Surrey. *Tel: Woking 3506* *Grams: "Current", Woking.*	136 Cromwell Road, London, S.W.7. *Tel: Fremantle 6301*	90 Vittoria St., Birmingham, 1 *Tel: Central 8581*

CLEANER, SAFER MORE EFFICIENT!

Greasy dirt on machines . . . ingrained grime on hands . . . they're inseparable from industry, but they're no help to smooth, efficient production.

WITH

Jizer
SOLUBLE SOLVENT

For Degreasing Machinery
Just brush or spray JIZER on, flush with water and the soil comes away as milky-white suds. JIZER won't clog drains.

For Production Degreasing
JIZER in a degreasing bath removes oily wastes and cutting oils — prevents subsequent rusting. No fumes —no evaporation.

For Cleansing Floors
Spray JIZER on, brush thoroughly, flush with water and the most dirt-encrusted floor comes up clean and grease-free.

AND

Swarfega
HAND CLEANSER

Removes the most stubborn grime from the hands in a few seconds —no matter whether it's grease, oil, tar, creosote, paint or dye. Antiseptic, emollient, SWARFEGA helps cuts to heal and reduces absenteeism through skin troubles.

SEND THIS FOR SAMPLES

To DEB CHEMICAL PROPRIETARIES LTD. · BELPER · DERBYSHIRE

Please send samples & details of JIZER SWARFEGA

Firm's Name _____

Address _____

_____

PM/2

* Cross out product not required.

A time for courage . . .

said the Chairman. I am told the economic outlook is uncertain—but I don't remember a time when it wasn't.

One thing is absolutely certain. The future of every one of us—during our working lives and afterwards in retirement—depends entirely upon hard work and enterprise.

It is the duty of management to exercise leadership, and we are demonstrating our belief in the future of this Company, and in each one of you, by introducing AS FROM TODAY the most permanent form of profit-sharing—a modern Noble Lowndes Life Assurance and Pension Scheme.

This will be paid for entirely by the Company, out of profits which we together are going to earn.

The Noble Lowndes Pension Service

38 LOWNDES STREET · LONDON S.W.1 · TELEPHONE SLOANE 3465 (15 LINES)

3 NEWTON PLACE, **GLASGOW,** C.3 · 119 TALBOT ROAD, **MANCHESTER,** 16 · 860 SEFTON HOUSE, **LIVERPOOL,** 2 · EASTERN ROAD, **ROMFORD** · BRUNEL HOUSE, **BRISTOL,** 1 · 202 HAGLEY ROAD, **BIRMINGHAM,** 16 · 5 EAST CIRCUS STREET, **NOTTINGHAM** · PHOENIX CHAMBERS, SOUTH PARADE, **LEEDS,** 1 · 64 FARGATE, **SHEFFIELD,** 1 · 21 COLLINGWOOD STREET, **NEWCASTLE-UPON-TYNE,** 1 1/3 QUEEN'S SQUARE, **MIDDLESBROUGH** · QUEEN'S HOUSE, PARAGON STREET, **HULL** · 5 WINDSOR PLACE, **CARDIFF** · 58 HOWARD ST., **BELFAST** · 39 KILDARE ST., **DUBLIN** · 106 FOX STREET, **JOHANNESBURG** · REGIS HOUSE, ADDERLEY STREET, **CAPETOWN** · 332/334 WEST STREET, **DURBAN** ANGWA STREET, **SALISBURY, S.R.** · CORONATION AVENUE, **NAIROBI** · 16 O'CONNELL ST, **SYDNEY, N.S.W.** P.O. BOX 2264, **AUCKLAND, N.Z.**

Associated Companies throughout Canada and the United States of America

Point Counter Point

Challenging Ideas & Events in Personnel Management

CLASS ON THE SHOP FLOOR

A CLUE to why the We/They barrier in industry still persists, although the benefits of its removal are patently obvious to both sides, is contained in the results of a study of a number of Scottish firms carried out recently by Mr. T. Burns of the Department of Social Study at the University of Edinburgh.

Mr. Burns, whose findings were presented in a paper to the B.I.M. Midlands Management Conference at Droitwich a few weeks ago, points out that a firm is not merely a working organisation but also a political system and a status system. He defines the status system as "the way in which rights and obligations in respect of other people, duties and privileges are distributed among the members of a concern in a systematic way." This structure is the product of the distribution of political power within the concern and of the social structure of society which is operating with far fewer of the grosser frictions between classes which were such a source of strain in the past.

Segregation in large, homogeneous residential areas, withdrawal into the home for gardening, TV and radio, and "do-it-yourself" occupations has very much reduced the number of occasions for encounter between people of differing social class. The more uniform distribution of traditional status symbols in clothes, personal possessions, speech and manner has reduced the manifest discrepancies evident on those occasions.

But within the workplace segregation can no longer be practised, says Mr. Burns. The educational and occupational basis of the contemporary class structure is obstrusively present and "marks of rank are insisted upon and, in many concerns, deliberately elaborated. Above all, however, the workplace exists as the arena in which occupational success—now the basis of social success in general—is gained or lost."

One should not lightly dismiss this theory of Mr. Burns. Conspicuously little success has been achieved in the past by working on the assumption that friction between management and workpeople stems basically from conflicting *political* ideologies. Maybe an approach from strictly sociological premises would yield better results.

PIECE-WORK PERILS

THE first-aid quarters in the new hinge and lock factory of Thomas Crompton & Sons, opened at Haydock, Lancashire in April, are spacious, well lit and well equipped. In attendance is a qualified nursing sister who treats an average of thirty accident cases a day.

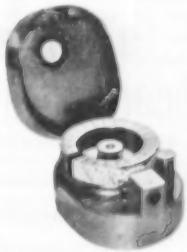
This is not an inordinate number considering the nature of the industry; most of the cases are minor cuts and abrasions inevitably connected with the handling of steel, and many of them are injuries which occur off the premises. The first-aid department insists upon recording and treating every injury, however small and wherever it happens.

For accidents which take place at work the simple answer seems to lie in protective clothing—in this case, gloves. But it is not so simple: steel handling is

"So the workers and management lived happily ever after."

BLICK

WATCHMAN'S CLOCK



YOUR WATCHMAN IS YOUR SECURITY

The BLICK System provides a simple, effective and inexpensive method of ensuring that your Watchman not only carries out his duties conscientiously, but carries them out in the special way advocated by the police—the way that virtually removes all risk of your premises being broken into. Write now for 12-page booklet describing this unique system.

BLICK TIME RECORDERS LTD
VINE YARD
99 ALDERSGATE STREET, E.C.1
MONarch 6256

supercraft

bears the mark of distinction

Let us introduce you to a new and specialised Supercraft service: embroidering of department titles or ranks of insignia on the pockets of Supercraft overalls and overgowns. Here's an added distinction to the industrial wear your staff is provided with—one which engenders departmental and status pride and at the same time helps efficiency by easy and rapid identification.

supercraft

PRODUCED FROM LABORATORY TESTED MATERIALS

The operative word for Industrial Overgowns

★ The same service can be called in for embroidering House badges and symbols on to pockets. It all adds up to one more reason for specifying Supercraft when industrial wear is being ordered. ★

SUPERCRAFT (GARMENTS) LTD.

Central Sales Office: 19 STRATFORD ROAD, SHIRLEY, BIRMINGHAM · *Tel. SHI.* 3809

FACTORIES AT OLDHAM

Point Counter Point

too hard on rubber gloves, and leather gloves, the workers complain, make them feel clumsy and slow down their production rate. To workers paid on piece rates this is the greatest frustration of all.

In compliance with the Factories Acts the firm supplies all types of protective gear—aprons, gaiters, gloves and goggles. The gaiters, say the employees, cause irritation and the goggles are inclined to mist up.

No prizes are offered for guessing what is wrong in this picture.

Here is a problem found in most factories, and it seems to be insoluble. The Acts state only that employers shall *provide* protective clothing. There is no legal basis for compelling employees to wear it. They, in their turn, appear quite willing to continue in this way, taking their chances.

With female workers the problem appears to be tied up with that of fashion. In a recent quiz organised by the Sussex Productivity Association a forewoman at a Portslade factory expressed the view that "girl workers will never wear protective clothing if they can help it, and the only alternative is to make machines so safe that protection is unnecessary".

This is not really an alternative, however. It is too closely connected with the problem of human attitude, for the real safety of a machine depends upon the precautions the worker takes in operating it.

It would certainly help matters if protective clothing were made more attractive to the person who wears it. But it is still one of those strange quirks of human nature that the attraction of an accident-free working life is not enough. To be fashion-conscious, it seems, is human; to be safety-conscious, divine.

BAKER'S DOZEN

AN amusing instance of slavish addiction to tradition was recently brought to light by the British Productivity Council's work study unit in Scotland. At one of their public meetings, the value of work study was challenged by the proprietor of a small bakery. The challenge was accepted and a work study officer visited the bakery.

This officer suggested six alterations in method as well as minor modifications to machines. Investigating the machine cutting operation of the head of the dough, the work study man was told that the baker pulled a lever and counted twelve. Asked: "Why twelve?" the baker answered: "It's always been done that way." Experiment showed that a count of four was enough, and this meant a saving of five hours a week.

LIONS AND TIGERS

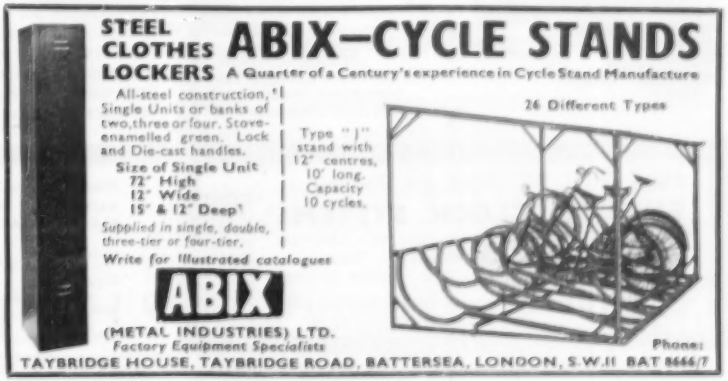
The lion has been challenged as king of the beasts. Lions of all descriptions—red, blue, black, golden, olde and new—are turning green at the latest elevation of a tiger to the public-house peerage. A snarling tiger is the motif which decorates the Royal Tiger underfloor diesel buses of Leyland Motors Ltd., and it will shortly be seen displayed on the sign outside the 200-years-old Earnshaw Bridge Inn at Leyland, where many of the firm's employees are "regulars," when the inn is renamed "The Leyland Tiger".

This new practice of reflecting industrial achievements in British inn signs is a splendid idea. The Marquis of Granby is preserved by the history books; neither Bulls nor Bushes have any claim to fame; but the beer might taste just that little bit better in "The Calder Hall" or "The Bristol Britannia".

PUSH-BUTTON SELECTION

FROM the U.S.A. come reports of the increasing use of punch-card systems in classifying personnel employed in industry and in municipal agencies.

New York's police force provides an interesting example. Information about all its members is now being punched on cars with perforations for name, rank, year of birth, where they can be usually found, special skills, interests, hobbies, etc., etc. As a result, it will soon be possible to select a policeman for a special assignment by pressing a combination of buttons. For instance, if the department has a sudden need for an ex-serviceman who can speak


STEEL CLOTHES LOCKERS
ABIX—CYCLE STANDS
A Quarter of a Century's experience in Cycle Stand Manufacture
All-steel construction. Single Units or banks of two, three or four. Stove-enamelled green. Lock and Die-cast handles.
Size of Single Unit
72" High
12" Wide
15" & 12" Deep
Supplied in single, double, three-tier or four-tier.
Write for illustrated catalogues
ABIX
(METAL INDUSTRIES) LTD.
Factory Equipment Specialists
Type "J" stand with 12" centres, 10' long. Capacity 10 cycles.
26 Different Types
Phone:
TAYBRIDGE HOUSE, TAYBRIDGE ROAD, BATTERSEA, LONDON, S.W.11 BAT 8666/7

There are more ways of commanding attention than shouting from the rooftops. For effective house journals on a realistic budget, consult *the* specialists.

Mercury Information Service Ltd.,
Mercury House, St. Bride St., E.C.4
FLEet Street 4030
PRESS AND PUBLIC RELATIONS

for greater security . . .

The Watchman's Portable Clock

With a Watchman's Portable Clock in use, you can check your night-watchman's patrol the next day. The watchman carries the clock; turns in it keys attached to wall boxes throughout the building, recording his position and the time on a tape in the clock. Tape acts as a permanent record. The clock has an 8-day movement, requires no supervision over weekends etc.

for greater efficiency . . .

The *Autoprint* Time Recorder

The Autoprint Time Recorder is fully automatic —no bar to push, no lever to press. "Out" recording can be made *immediately* after "In"—vital where overlapping meals and shift work occur. Resets itself every night for the following day. The time card provides an indisputable record. No overstamping or obliteration possible. Post the coupon for free brochure.

POST THIS COUPON OR PHONE:—
ENGLISH CLOCK SYSTEMS*
179-185 GT. PORTLAND ST., LONDON, W.1. LAN 7226
Branches in Manchester, Glasgow and Belfast
*A BRANCH OF THE CLOCK AND WATCH DIVISION OF SMITHS S. SMITH & SONS (ENGLAND) LTD.

Please send me, free of obligation, details of the
AUTOPRINT TIME RECORDER · WATCHMAN'S PORTABLE CLOCK · MASTER CLOCK SYSTEMS · WALL CLOCKS, etc.

Name .....
Organisation .....
Address .....

C612

Japanese, or a horticulturist with Italian forebears, the push-button system will produce a list of candidates in a twinkling.

Admittedly, very few personnel managers will ever have to seek out a left-handed lathe operator with a knowledge of bee-keeping in a matter of seconds. Even so, the advantages of the punch-card system in large firms with many scattered branches needs no stressing.

INDUCTION WITHOUT TEARS

SURELY no youngsters have a happier initiation into industry than new apprentices to the North-West, Merseyside and North Wales Division of the British Electricity Authority. Their course is held at the Y.M.C.A. Camp, Lakeside, Windermere, where the boys are accommodated in chalets on the wooded slopes beside the lake.

Induction is a blend of instruction and pleasure; lectures, films and debates are interspersed with all sorts of games and athletics. In this atmosphere, I am told, the apprentices find even the talks fascinating though they

Why not start working life with something resembling a holiday?

cover more or less the stock subjects given to apprentices everywhere, namely—history of the industry and its present organisation, careers and keeping fit, safety at work, and so forth.

It could be argued that disillusion is likely to set in after the week's idyll is over and the youngsters find themselves in the grimmer reality of industry and study. If that be the case, so far there has been little evidence of it. Why not, after all, start working life with something of a holiday, especially if it means building up very favourable first impressions?

"I WAS THERE"

WHEN, in our September, 1955, issue, we discussed the function and nature of the house journal, we gave a list of editorial "do's and don'ts" which included the two axioms: "Make it primarily a family affair" and "Keep it intimate and readable". The intimate, family style of presentation is fairly easily achieved in the short news items on workshop personalities, the births and marriages column, developments within the firm and so on. These prove a great draw with the employees because they like to read about people they know, and especially about themselves. The readable is often more elusive.

Even the most popular features can pall after a time unless they are livened up periodically with some fresh treatment or gimmick (call it what you will) which in the long run owes more to pure journalism than to human relations. It is the journalist's job to "dress up" the commonplace, to transform the superficially uninteresting into the interesting and readable.

For the editor of a house journal, headline material is not easily come by in the normal firm's run-of-the-mill routine. For the real news he has to dig deeper. Christine M. Clymer, editor of *Goodwill*, the staff magazine of the Owen Organisation, has dug into the past for her news material. In a series which she calls "I Was There" she gives fresh appeal to events which were in the news many years ago by presenting them from the viewpoint of employees who were on-the-spot witnesses.

In the Spring issue of the journal, readers are taken back to Derby Day, 1913, the day when the suffragette, Emily Davison, threw herself under the King's horse. An employee at Warrington was standing by the rails and saw the whole thing, and his story is published just as he remembers it. It is the sort of story one tells to one's friends, but which seldom gets any further. Here, with a dramatic picture of the incident to add to the effect, it hits the headlines once more, not just as a news item but as a story intimately connected with a works personality—the whole made eminently readable.

TELLUS model XF 120 for large-area floor cleaning.

All FACTORY CLEANING *jobs are simplified with*

TELLUS

Keeping down dust and dirt in factories and offices is no problem at all if you install the TELLUS Suction Cleaner. With its powerful aero-cyclonic suction; high mobility and complete range of accessories for reaching inaccessible places, the highly efficient TELLUS makes short work of cleaning walls, floors, ceilings, girders, pipes, machinery, etc. And TELLUS is ideal, too, for cleaning boiler tubes without the mess involved when soot is blown out. Let us tell you more about TELLUS and show it to you in action.

Write now to:

TELLUS SUPER VACUUM CLEANER LTD

39 Sheen Lane, Mortlake, London, S.W.14 *Tel.: PROspect 4495/7*

FORMICA* for me!

. . . say the Managing Director, the Personnel Manager, the Foreman, the Operatives and every member of the Office Staff too. FORMICA laminated plastics for all benches and working surfaces . . . Because they're smooth, hard, hygienic, everlasting! Because they bring colour and gaiety into workaday surroundings (over 50 colours and patterns to choose from). Because they can be fitted to existing furniture and equipment. FORMICA laminates for you!

Write for full information to Thomas De La Rue & Co Ltd. Dept F420 84/86 Regent Street London W1.

FORMICA is the registered trade mark for the laminated plastic made by Thomas De La Rue & Co. Ltd.

Look for the FORMICA trademark on every sheet

A little learning is a dangerous thing. So, for that matter, is a little information, but a recent survey shows that enough of the right kind is a safe bet for better relations with your workpeople.

When it's a Matter of Money

Your Employees Want to Know the Facts

By DAVID JUDGE

JOHN SMITH, fitter, foreman, clerk, or better still, simply, employee, has just drawn his weekly wage packet. He has paid his union dues and his subscription to the works sports and social club, and now he is off through the factory gates to enjoy his week-end. He is a good worker, conscientious and takes an interest in his job. But is that all? Does his interest extend further than his work and what he is paid for it? Does he, in fact, want to know how the company is faring financially, how it plans to expand and develop in the future?

The answer, according to a recent survey report by the British Institute of Management, is, decidedly, yes. The survey which was carried out by arrangement with the Board of Trade, and financed from funds derived from United States economic aid, investigated the attitudes and practice of 160 British firms in giving financial information to their employees. **But, although the survey discovered that the large majority of workers want to know these facts, results suggest that probably less than 20 per cent of all British firms take the trouble to satisfy their workers' curiosity.** Indications are, however, that the numbers are growing.

John Smith, then, wants the financial facts. But *what* exactly does he want to know, and, equally important, what does his company want him to know? Amongst those firms who are willing to publish this material there was a conviction that certain disclosures were at best undesirable, and could, at worst, be damaging. Details about sales, turnover, costs, and expenditure on research, they objected, might help their competitors, and they were unwilling to give salary details since this would infringe the rights of the individual.

They considered, too, that there were limits to the ability of employees to understand the information, and limits to the resources available to the company for its publication.

We shall come to the methods of publication later, but on the former point it is interesting to note that in a detailed study which was made of six firms who presented their staff with the information, on average a little less than 50 per cent of the workers understood most of the information they received, and considered that it was presented clearly. There were more besides who understood the information "as far as it went," but felt they were not being told enough.

There were seven firms altogether in the detailed survey. At the seventh only apprentices were questioned. Over 60 per cent felt they were receiving no information at all, and amongst the rest was the conviction that what facts they did receive were inadequate and ill-presented.

Considering the lively interest they seemed to show in the subject, the report suggests, their company should make more effort to supply the information by special instructional sessions on these and allied topics.

Between 69 and 92 per cent of all employees at these firms felt that management should supply its staff with information. It cannot be assumed that they will all read it, but these results suggest that a large proportion will.

It is obviously not enough to sum up employees' demands for information, as some managers do, as merely "anything that has to do with wages, of course." The survey has found that employees want rather more than this. In the seven-firm study an analysis was made of employees' special interests. The lowest reaction was to the suggestion that they wanted only items which affected them personally. A large number said they wanted all the information they could get, but where this was a reasonable answer from the executives questioned, whose job it is to know the bulk of the financial facts, the investigators believe that many lower ranks gave this answer for reasons of general vagueness on the subject, or because they felt that if they were interested in anything, they ought to be interested in everything. Perhaps, too, there was the feeling that if management offers you anything you must show goodwill.

Of all the aspects of finance, however, that which proved the most intriguing to the workers was the sub-

ject of new developments and trade prospects. They were inclined to ignore profits, and least interested of all in "operating costs and how to reduce them". Although the report deplores their lack of concern, this was expected, just as it was expected that the majority of those who *were* interested would be at supervisory level, as indeed they were.

There seems to be a link here between the latter group's interest in cost reduction and its superior interest, taken proportionally, in works suggestion schemes. Their cost-consciousness is undoubtedly synonymous with a desire to justify their position by increased efficiency in their particular departments, and it would probably be a worthwhile task for management to explore this interest more deeply; if they can be further awakened to the problems of costs, the signs are that it would be an investment in efficiency, **for, as the survey found, neither they nor the executives seemed to know as much of their companies' general finances as might be expected.**

Employee interest in future developments and trade prospects was not examined in detail during the survey, and the report only suggests reasons. Security is probably the uppermost thought in the employee's mind—security for himself and his dependants. To him the rate at which the company expands, or markets are extended and gained, has a direct bearing on his job. He has only to consider the car industry of late and he will understand clearly enough how a drop in sales creates redundancy, and how, when the market picks up, job vacancies increase. Trade prospects, it seems, are moving out of the boardroom and becoming part of the worker's "bread and butter" thinking. If management wants his and the unions' co-operation in times of recession (and only the most pessimistic will ignore the marked change in the worker's traditional attitude which has taken place already) it should certainly see that he is kept abreast of the facts.

Some companies argue that while a high turnover satisfies the reader, a low one will create false despondency on all sides. Similarly, a small company's bank overdraft is often misunderstood. Surely the answer is that, left uninformed, the worker will do his own thinking, which may well be inaccurate, and certainly damaging to human relations.

The trade unions, as the workers' bargaining representatives, have been quick to express themselves on the subject. One of the report's appendices is a memorandum received from TUC, which stresses the "responsibility of trade union officers to explain to members the basis of agreements into which they have entered," a task which often involves detailed discussion of the respective companies' financial strength. The memorandum continues, quite fairly:—

"Any such . . . task of assessing and explaining can be made difficult, if not impossible, by the absence of the full facts of the situation, and a substantial check to industrial harmony and co-operative efforts to increase efficiency can result. Managements can, unwittingly, give themselves the appearance of being unduly secretive and restrictive".

Discussion Wanted

The unions have their means of obtaining the information they need for bargaining; the nationalised industries are generous with it, public companies publish it in the Press and it is occasional, though generally exceptional, practice for the unions to become shareholders. In fact the only instance of negotiating "in the dark" is in the case of private companies, the majority of which are under no legal obligation to publish their accounts. But, the unions continue, management's duty does not end when they have presented their financial facts; if they want to set themselves above all suspicion *they must be ready and willing to discuss it.*

They recognise that individual companies will have individual difficulties, and they show willingness to discuss the particular to find a general solution.

It was shown above that employees were comparatively uninterested in profits. This is significant since, whenever company reports are published in the Press, great prominence is given to profits. The report suggests that perhaps management feels compelled to explain and justify the profit concept to the mass of workers who are "obsessed with faulty notions . . ."

The report admits that its findings are on too small a scale to justify a refutation of this belief, but it does suggest that perhaps directors are too pessimistic. The detailed survey produced an overwhelming percentage of workers who were satisfied their company had made "enough to give shareholders and employees a fair return and to ensure the future prosperity of the business".

The unions themselves point out that since the profit and loss account covers a period of twelve months and is not available for several more months, it is of little use as an assessment of the *current* position of an undertaking.

The reason for the employees' lack of interest, however, seems to be that they find it easier to absorb facts than figures alone. This became clear in several tests which were carried out in the seven firms studied. On the whole, although figures could be remembered fairly clearly if a special effort had been made to impress them upon employees, greater success was found in answering factual queries, such as: "Which of the following products made the most profit for the company last year?" and "Which are in quantity production?"

As far as the report is concerned, how much information employees actually remember will depend upon two considerations. The first is the attitude of management in presenting the facts, whether the firm shows that this is something it wants its staff to know; whether they create the impression that they are being perfectly frank, or merely half-hearted; whether they bombard the employee with complicated, wordy announcements which may or may not be aimed to discourage him from asking further questions; and, above all, whether they show that they are genuinely interested in the employees' curiosity, or only offering a concession to "keep them happy".

The second consideration is the media used for presentation. From the seven firms studied in detail, seven different methods of presentation arose,

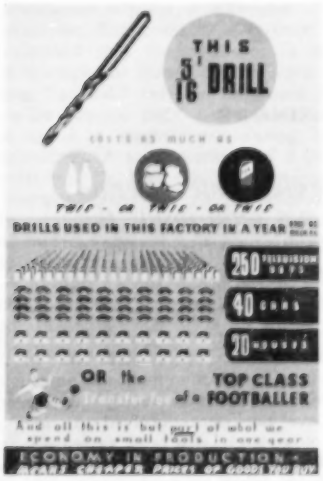
Invisible Assets

There are several ways of presenting financial information to your employees. One attractive method reported by "Manpower Today," the U.S. personnel management newsletter, combines the strictly functional with something of the party spirit. Invisible ink, it seems, is used by General Motors to print earnings figures in a special report for employees. The game is to estimate the figures, then dip the page in water to bring out the correct statistics.

the most successful being the house journal. This is always popular and widely read, and a carefully prepared report stands every chance of getting the attention it deserves. A special feature article is obviously the best treatment, but in only three firms out of seven was the information given this pride of place. The other four tended to treat the material as a ready-made "space filler" and gave it only small paragraphs hidden away in the text. The report suggests that prominence should be given to a few main points, illustrated with a few figures to add emphasis; much use could be made of simple diagrams, photographs and striking headings. The chairman's speech is too long to hold the reader's attention, but carefully chosen quotations would add point to the story, especially as captions to the pictures.

It was also found advantageous to publish special reports for the employees, where the same principles of layout and presentation apply. Use could also be made here, the report says, of the annual report which the company presents to shareholders. **If simplified treatment is needed to brighten the complicated accountancy style, it would probably be welcomed as much by the shareholders as by the employees.** This can, however, involve much time and trouble, and it may be better in the long run to produce a special report for staff only. In any case, success should not be expected without some form of readership analysis beforehand.

With the aid of this colourful illustration in their 1956 report for employees, United Steel showed their workers where the money goes.



Equipment is costly—from reminders like this each employee of Rubery Owen Ltd. learns not only to guard against waste, but also how money is spent on equipment for his particular job.

Notice boards can be used, but only for presenting extremely simple items. In two firms it was a popular source of information, and was used to publish the total bonus figure paid to employees. Here it was successful, but if used for announcements requiring more concentration it had obvious disadvantages.

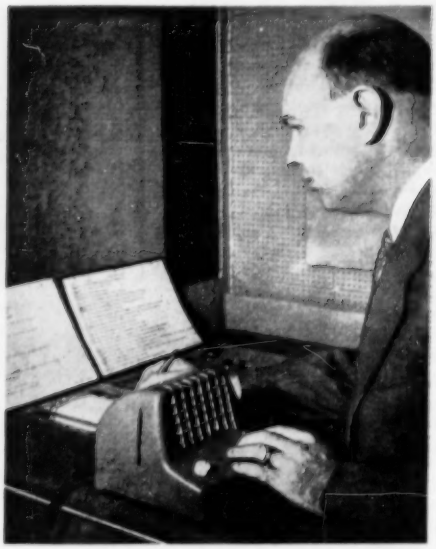
One firm used an internal broadcasting system to announce the value of the factory's total output. Here again, concentration is impossible. Everyone hears it, but after the first few sentences how many people actually listen?

The Press, both national and local, gives considerable coverage to many firms. Press publicity can be most beneficial to a company, especially in the case of the local Press where it can be part of the sustained campaign for good community relations. It is undoubtedly interesting, and often pleasant, for employees to read about their firm in the daily newspaper, but if it is not linked with similar publicity within the firm it can have its disadvantages. The worker may suspect its veracity and, above all, he would be quite justified in thinking: "They tell the whole country about it, but they ignore me". He, after all, did have a hand in making the profit.

Works consultative committees are keenly interested in receiving and discussing financial information, but as a source of general employee information the survey does not place them very highly. Methods of reporting back to the workers are usually inadequate, and consequently little or nothing is passed on. This was found to be the case in all the seven firms investigated. It is by no means inferred that the committees should be ignored when the information is given out. Financial information must be an integral part of joint consultation. The company can also use it to test employee reaction in a small way, and can receive comments which might otherwise have gone unsaid.

John Smith, our theoretical employee, is now a satisfied worker. He has asked for the facts, explained exactly what he wants to know, and has received them. Moreover, he has understood and digested them. But before we take leave of him, there is one question still to be answered. Why has his employer gone to all this trouble? Why *should* he, indeed? It is the answer to that question which will determine whether management will take note of the

(Continued on page 34)



Two rings are slipped over the job candidate's fingers and the process of electronic selection begins. In the nearer picture the evaluator draws up the original test pattern from the machine's responses.

Now Electronics Select New Workers

By ROBERT McKINNON

Here are details of a new electronic selection method which claims to get right inside the candidate's mind. We leave it to the readers themselves to judge the ethics of the technique.

NEW examples of electronic ingenuity are so numerous these days that the expert himself has seldom time to consider their full implications. Just the same, more than one personnel manager is going to think twice about a new electronic selection process now being used by one or two firms in the United States.

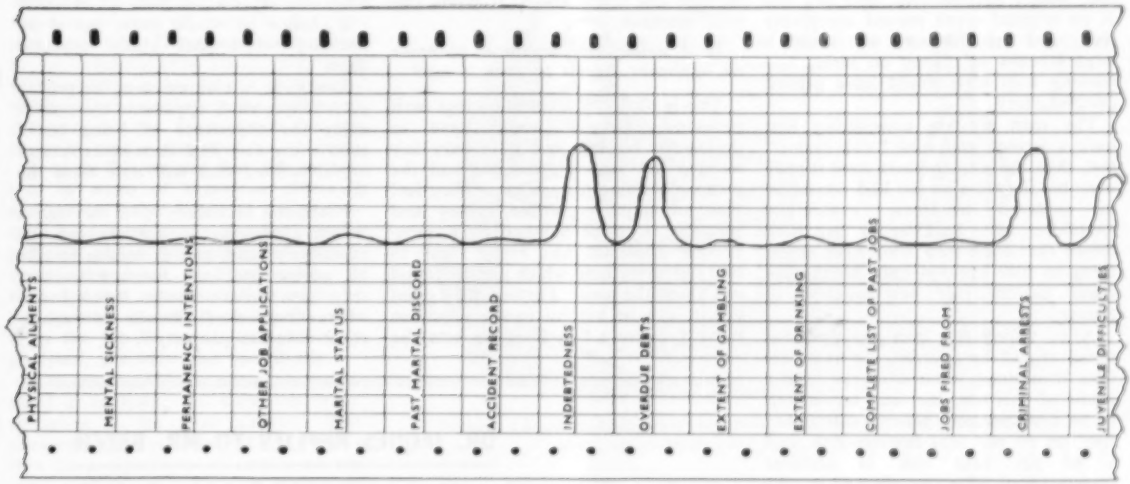
This new process, called Backster Evaluation after its inventor, Cleve Backster, a New York management consultant, hinges upon a machine known as the Electronic Evaluator. With it, a personnel executive, it is claimed, can find out just about everything of importance in the background of a prospective employee—if necessary, in about two hours. And the machine is said to reveal not only facts that are actually on his record but even, for example, cases of past dishonesty which nobody but the applicant knows about.

In fact, by the time a job candidate has undergone his testing, Backster Evaluation men can predict whether or not he really intends to stay in the job, the possibility of his becoming a personnel problem and his accident probability.

"All this" it is stated, "is based not on what the man says or writes on his application form, but on what is actually in his mind".

The Electronic Evaluator is the result of ten years' research. In the course of designing and improving psychological laboratory equipment, Cleve Backster conceived the idea of a completely new and extremely sensitive emotional response indicator which could be used along with oral and written tests to screen the backgrounds of job applicants.

But, says the inventor, the Electronic Evaluator is *not* a lie detector. An ordinary lie detector, it is pointed out,



works essentially on the basis of relative changes in blood pressure, pulse rate and pulse strength, depends on strong "fear responses" and demands questions which can be answered "yes" or "no".

The Evaluator, however, is said to be a different kettle of fish. Through two little ring contacts placed on the fingers of the job applicant, it records extremely minute physiological changes which take place whenever a topic that causes him any emotional disturbance is mentioned. To many this will seem a distinction without a difference.

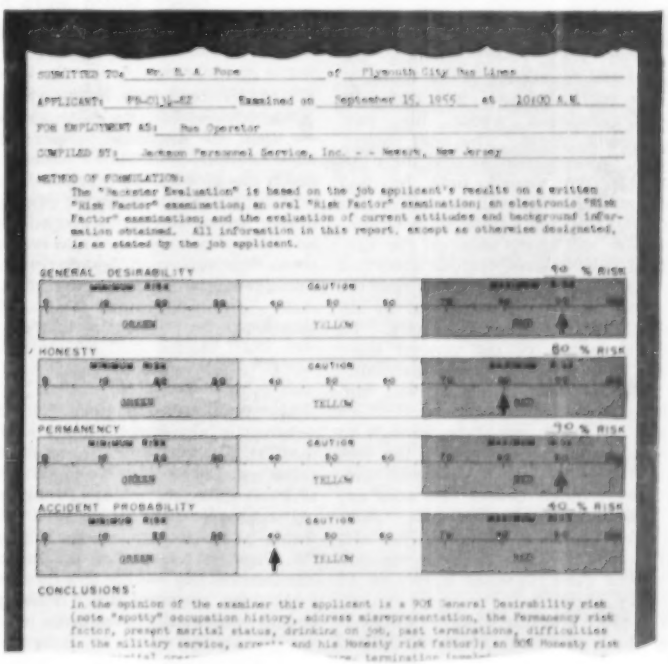
Anyhow, distinction or difference, it is claimed that the applicant is not put through the humiliating process of being "grilled" such as he would be in a lie detector test. *Indeed, he need not speak a single word during the evaluation.* A mere mention of a particular topic by the examiner may cause a reaction to register on the machine. The examiner can then probe further and find out just what is bothering the applicant.

A number of bus companies, in particular, are using the Backster Service, and, as an example of how it works, here is an actual report on a man (not the one in the picture) who had applied to an inter-city bus company for a driving job. Prior to being tested by Backster, he had been tentatively selected to join a training class.

(Bus companies, of course, have special selection problems because employees are responsible for the safety of countless lives, and often have considerable sums of money to handle.)

As a result of the Backster screening this man and four others were considered too risky to hire, although the original check by the bus company had failed to show up any derogatory information. In fact, so far as this

(Continued overleaf)


SUBMITTED TO: Mr. R. A. Poore of Plymouth City Bus Lines

APPLICANT: PB-0115-62 Examined on September 15, 1955 at 10:00 A.M.

FOR EMPLOYMENT AS: Bus Operator

COMPILED BY: Jackson Personnel Service, Inc. - - Newark, New Jersey

METHOD OF FORMULATION:
The "Backster Evaluation" is based on the job applicant's results on a written "Risk Factor" examination; an oral "Risk Factor" examination; an electronic "Risk Factor" examination; and the evaluation of current attitudes and background information obtained. All information in this report, except as otherwise designated, is as stated by the job applicant.

GENERAL DESIRABILITY 90 % RISK
HONESTY 80 % RISK
PERMANENCY 90 % RISK
ACCIDENT PROBABILITY 40 % RISK
MINIMUM RISK CAUTION MAXIMUM RISK
GREEN YELLOW RED

CONCLUSIONS:
In the opinion of the examiner this applicant is a 90% General Desirability risk (note "spotty" occupation history, address misrepresentation, the Permanency risk factor, present marital status, drinking on job, past terminations, difficulties in the military service, arrests and his Honesty risk factor); an 80% Honesty risk

A quick report form reveals the applicant (not the man in the other picture) as a 90 per cent desirability risk, an 80 per cent honesty risk, a 90 per cent permanency risk and a 40 per cent accident probability risk. Above. Final test pattern shows unresolved Evaluator reactions as regards indebtedness, overdue debts and criminal arrests.

case history is concerned, only two out of an original seven proved acceptable risks, and the company was saved a large amount of money on hiring and training men who would have proved unsatisfactory.

The man we are considering first took a written and oral "risk factor" test, then the ring contacts were slipped over his fingers after he had consented to undergo electronic evaluation. (Actually, says Backster, it has been found that even men who have something to hide are not only willing but eager to try this new method of testing.)

After telling the man exactly what topics would be covered, the examiner then mentioned some of these. As a result of this test, the man turned out to be a 90 per cent general desirability risk, an 80 per cent honesty risk, and a 40 per cent risk in accident probability. This is shown to the company in a quick chart form.

Two test patterns are drawn up in graph form with the aid of the Evaluator. The original pattern indicates areas of disturbance in the examinee, and the examiner then covers the topics that are causing the disturbance with questions that let it be known he too is aware of the disturbance.

Unresolved Reactions

The final test pattern should indicate graphically that the examiner has got the true story. For instance, the original test revealed that the applicant in this particular case was disturbed when questioned about his past employment record. The final pattern reveals, however, that he told the truth about it the second time he was questioned, for it will be noted that this time the line barely wavers. But there are still sharp rises on the subjects of indebtedness, overdue debts and criminal arrests. These mean that the examiner never could discover all the man's troubles in these matters. To use the jargon of the process there were "unresolved Evaluator reactions." In other words, the man was still holding back something.

This, in itself, could be enough to prevent the applicant getting the job, though in this case it happened that there were other reasons that need not be discussed here. *But the point Backster wishes to make is that this man would have been given the job if he had been subjected merely to an ordinary check.*

Yet, since the test revealed information about this man which until then no one else knew about, it poses one vital question:—

Is it unfair and unethical to make an applicant submit to such a test?

This is obviously a question that each personnel manager would have to decide for himself, but it is only fair to give the view of Backster and the companies using his process. They feel that an employer whose money and property is to be handled by a prospective applicant has every right to find out everything which can be found out about the man. Further, they point out, it can be helpful to the applicant himself because "at least he gets the chance to explain any previous mistakes —a chance he would never get if an ordinary impersonal check revealed them".

Lastly, it is claimed that, surprising as it may sound, applicants themselves enjoy the experience of being tested *even when they find themselves revealing something that will cost them the job.*

"Almost invariably", it is stated, "such applicants go out shaking the examiner's hand, and promising to take his advice and look for a job where they won't have to be bonded and where they won't handle money or other valuable property".

DR. JAQUES REPLIES TO MR. BEECH

The Time Span IS an Accurate Yardstick

Dr. Elliott Jaques defends his theory of wages and salaries against the criticisms of Mr. Hugh Beech which were published in our February and March issues.

I HAVE read with interest the two articles by Mr. Beech on the time-span of discretion, appearing in your February and March issues. Mr. Beech has given a fair statement of my views about the measurement of responsibility. Moreover, in his second article he raises some very important questions about the time-span measurement. I would welcome the opportunity to make certain comments on these questions.

Was I Biased?

Mr. Beech asks whether the results reported might not be influenced by the fact that the observations have all come from work done by myself. Does this not introduce a possible bias into my results? The nature of the bias would be that of my intuitively gauging the wage or salary that the person I am interviewing would feel to be fair, and then unconsciously deriving a certain time-span in advance of the work analysis.

This is an important point which Mr. Beech raises. The answer, I think, however, is a straightforward one and is as follows:

Time-span analysis is based on an objective description of a particular job of work as it is actually organised at the time under consideration. What I get is an actual description of the discretionary and prescribed content of the work and of the existing means by which the manager in charge of the member doing the work would get information about sub-standard work being done. This exploration is not a vague and general one; it is a precise and actual exploration of the work as then organised.

It is from these objective facts that the time-span is taken, and not from any intuitive judgment of what the time-span might be. It is precisely because the time-span instrument deals with the objective facts of work organised in a particular job at a particular time, that the striking result was obtained of absence of disagreement between man-

agers and subordinates about the measure of level of work in the subordinate's job. Disagreements turn out to be disagreements about fact; such disagreements have, in my experience, always been resolvable by means of reference to the facts about the job of work that is expected to be done.

It is in this respect that job evaluation in terms of time-span differs, I think, from other forms of job evaluation, i.e., opinions do not have to be gathered about the amount of experience, or training, or imagination, or initiative that someone thinks might be required by somebody doing the job. It is the job of work itself which is analysed, precisely and specifically.

Any two individuals using this instrument in analysing the same job ought to arrive at the same answer. This consistency I have been able to verify now in comparisons of results of my own analyses of jobs with results of analyses carried out independently by others who have learned to use the instrument.

Popular Error

A second point of criticism made by Mr. Beech is that time-span measurement relies on the detection of something wrong by the next person up the chain, either by direct observation, or by reports from customers or from colleagues in other departments. It would appear, Mr. Beech continues, that the time-span measure is influenced not only by the performance of the worker, but by the efficiency of the supervisor.

This criticism would be a very serious one indeed if it were the case. It is based, however, on a commonly-held misconception which requires comment.

The fact is that time-span measurement does **not** depend on the actual assessment by a superior. **It takes into account only the time at which the superior becomes informed of substandard work, regardless of whether the superior takes any action upon it.**

In other words, it is based upon a study of the executive mechanisms by means of which information reaches superiors about the quality of the performance of their subordinates, regardless of the action which the superiors take. It is a statement about an organisational mechanism and not a statement about the quality of the judgment of the superior.

Inadequate review of a subordinate's performance by his manager, therefore, does not in and of itself increase the time-span of a subordinate's work.

Jorkins, I know nobody deserves a rise more than you do, but it doesn't show up in your Time Span of Discretion.

The Whole Story?

The most general question which Mr. Beech raises about the time-span of discretion is that of whether "time-span is the whole story" with regard to wage and salary levels. I am glad that Mr. Beech raises this question, for it gives me the opportunity to emphasise that I have not said and do not say that level of work as measured in time-span of discretion, in and of itself determines the actual level of wages and salaries.

What I have said, however—and on this point I lay great emphasis—is that **the level of work as measured in terms of time-span of discretion, does correlate with what is felt to be fair payment by employees given that level of work to do.** To state this another way, what has been discovered is that employees—whatever their type of occupation—who are given work which measures the same level of work in time-span, state quite independently of each other the same salary or wage as being fair for that work.

The actual distribution of wages and salaries may, in fact, deviate from this felt-fair pattern of differentials. That is precisely the important point. For it is to the extent that actual wages and salaries deviate from this felt-fair scale of payment, that in my experience trouble arises—trouble either in terms of individual complaints about payment, or in terms of differentials disputes.

In short, on the basis of my limited experience so far, there appears to be an underlying wage and salary structure in people's minds which is related to the level of responsibility carried in the job—a level of responsibility which appears to be measurable in time-span—a structure of payment against which people intuitively assess the fairness of the actual salary which they are being paid.

I am now prepared to go further than I did in *Measurement of Responsibility* and to say that I think that an approach to the question of payment, wages and salaries, could be based upon payment for level of work; were this done, I think that it would be possible to cut through many current problems of wages and salary payment, particularly differentials disputes and intractable wage negotiations. I make this comment on the basis of recent developments which now make it possible to use the time-span instrument in measuring all hourly-rated manual jobs in exactly the same manner as staff jobs.

Finally, in relation to a very relevant comment by Mr. Beech that some kind of handbook of case studies would be useful, I would refer the reader to an article by J. M. M. Hill entitled, "The Time-Span of Discretion in Job Analysis", published in *Human Relations*, Vol. IX, No. 3, 1956. This is an article by one of the executive members in the Glacier Metal Company, which describes his own experience with the use of the instrument, and gives fairly detailed case histories of the time-span analysis of three different types of work—drawing and design work, manual machine operation, and research investigation. I hope, myself, to publish a much more detailed account of the use of these instruments in due course, and am initiating some limited courses of training.

GAS

The fingerprints of disease can destroy life!

Instantaneous and ample hot water is the greatest single combatant to dirty, disease-spreading hands — and gas provides it efficiently, reliably, instantly and economically.

Area Gas Board Engineers enable you to economise on fuel and labour.

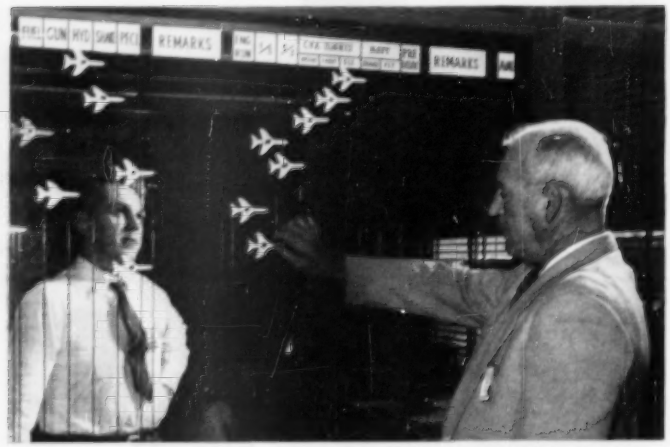
It's well worth while to CONSULT YOUR AREA GAS BOARD

The Gas Industry makes the best use of the Nation's coal

Issued by the Gas Council

Management News and Ideas

SEEING BOTH SIDES



Mike Bilchak, left, general foreman of Chance Vought Aircraft Inc., U.S.A., designed this time-saving status chart for planes on the production lines. It gives instant information in two rooms at once.

How to Run a Premium Bonds Scheme

HOLDERS of Premium Savings Bonds are now looking forward to the first draw for prizes, ranging from £1,000 to £25, which takes place this month. Every bond is included in the draws after it has been held for six months, and to make it easier for employee members of a works savings group to participate in this "win while you save" project the National Savings Committee has devised some helpful new schemes.

The first is a "bulk purchase" scheme which gives employees the advantage of buying pre-dated bonds by instalments. An employer who affiliates a savings group for this purpose can obtain, by pre-payment, stocks of bonds from the Premium Savings Bond Office at Lytham St. Anne's, Lancashire. Bonds of one, two or five units will be supplied, dated from the day of issue, for re-sale to employees who can subscribe for any number up to the 500 per person limit. When the employees have paid for their bonds the firm sends each subscriber's application form to Lytham St. Anne's office for registration.

The second scheme is known as the "schedule scheme." For this the secretary of a savings group obtains bonds for members who subscribe regularly, by arranging with a Post Office, Trustee Savings Bank or Joint-Stock Bank to accept completed application forms together with a list of applicants and the money.

The name of the holder will be written on the face of each bond and the secretary should obtain a receipt from the subscriber when the bond is passed over.

It is possible to buy Premium Bonds through an existing savings group by buying 2s. 6d. savings stamps which can be placed on a special Bond Stamp Card. When eight of these stamps are collected they can be exchanged for a £1 bond. Members of National Savings Clubs can buy bonds by withdrawing money saved in the club account and filling in application forms supplied by the club secretary.

Another method is the Bond Gift Token which some firms are giving to employees as a bonus or as an award for long service. Local savings committees or National Savings district offices will be happy to give help or advice to firms wanting to avail themselves of any of these schemes.

Age Barrier Breached

IN our December issue we commented upon new laws in the United States designed to "crack the age barrier"—forbidding employers to state arbitrary age limits in their advertisements for job vacancies. While the "too old at forty" mentality is not unknown in this country, it is good to know that little evidence of it has been encountered by long-term regular servicemen seeking civilian jobs after leaving the forces.

In its report for 1956 the National Association for Employment of Regular Sailors, Soldiers and Airmen, announces that of 1,933 long-service men registering last year, 1,857 were placed in employment, or 96 per cent. The large majority of these men were in the 40-50 age group.

The report attributes this success to the fact that there is obviously a continuing demand for such men in industry and other employment, and foresees that, if he takes every advantage of the continually improving training and educational facilities within the services, the man who signs for a long engagement can actually improve his chances of getting the higher quality job when he returns to civilian life.

Holiday Windfall

BEFORE those Heinz employees who are eligible for one to two weeks' holiday down tools this year they will receive double their weekly rate of pay for the holiday period. This arrangement (which does not apply to the extra week's vacation for those workers with over 15 years' service) replaces the bonus the company paid in August, 1955 and again last year.

Making this announcement, the Board of Directors stated that the extra payment was made possible by the firm's prosperity which its employees had helped to create.

PERSONNEL APPOINTMENTS

Expansion of personnel activities following the formation of separate operating companies for ice cream and meat products in the Wall's group has led to the announcement of changes in the firm's personnel department. **MR. J. M. BRIDGES** becomes personnel manager for T. Wall & Sons (Ice Cream) Ltd., assisted by **MR. F. W. SMITH.** Personnel manager of T. Wall & Sons (Meat Products) Ltd. is **MR. E. A. KEEGAN,** assisted by **MR. A. E. H. SWAISLANDS** and **MR. M. W. EAGLETON.**

SIR PETER ROBERTS, M.P., has been elected president of the Industrial Catering Association. He is chairman of Newton, Chambers & Co. Ltd., and chairman of Wellman Smith Owen Engineering Corporation Ltd.

Responsibility for the 165 canteens in the South-Western division of the National Coal Board is part of the duties of **MISS MARY P. VILE,** appointed catering officer for the division. She succeeds **MR. WILLIAM THOMAS** after four and a half years as his assistant. Miss Vile is also Press officer of the South Wales and Monmouthshire branch of the Industrial Catering Association.

A Technological Exodus

But all not plain sailing for engineers

THE Professional Engineers Appointments Bureau of 9 Victoria Street, S.W.1, in its recently published Report for 1956 continues to provide evidence of the unabated demand for technological manpower. An interesting feature of the work during last year was the increasing number of Canadian and American firms using the Bureau's service. It is not, however, the policy of these firms to recruit engineers from this country whose experience can be described as general and an appointment is unlikely to result where the experience of a candidate is not in some specialised field of engineering. Unless an engineer has good academic qualifications and adequate professional experience, the prospect of obtaining a post before arrival in the country is not encouraging.

The complex national situation at home has tended to encourage more people to seek the opportunities and standard of living available in Canada, the Rhodesias and other Commonwealth countries. The possibility of a larger number finding employment overseas must be recognised. So long as the supply of engineers remains below the level necessary to meet the increasing demands to fill outstanding vacancies at home, no opportunity should be lost to emphasise the great importance of increasing training in this country, to a point where the supply of young engineers can keep pace with the expansion of engineering at home and overseas.

The number of vacancies notified did not fluctuate appreciably, but a larger proportion was for senior administrative posts. The more senior appointments now attract a reasonable selection of qualified applicants, which suggests larger numbers of more experienced engineers are considering changing their posts than a year ago. Average salaries of successful placings were higher than for previous years, and it is now difficult to find sufficient candidates from those registered who are seeking salaries much below £800 p.a., compared with past years when it was relatively simple to fill the junior posts.

Employers and engineers have found the Bureau particularly useful in obtaining information on the current position of employment, whether it be the supply of, or demand for, members of the Institutions of Civil, of Mechanical or of Electrical Engineers. The Registrar is always glad to offer the facilities of the Bureau to Corporate Members, Graduates and Students of these Institutions who are contemplating a change of post, and to any employer who wishes to fill a vacancy.

Computer Courses

A "PLAIN MAN'S GUIDE" to the workings of an electronic computer formed one of the sessions at a recent Scarborough conference on "The Electronic Office." Other sessions at this, the eleventh post-war national conference of the Office Management Association, included reports from five speakers who have practical experience of applying computers to office work, and descriptions by three others on how they investigated the introduction of office automation.

The object of the OMA is the improvement of clerical methods in offices; in addition it provides facilities for groups of members meeting regularly throughout the year to examine electronic computers and method study in the office. It is one of the sponsors of the proposed British Conference on Automation and Computation.

'Suggestive' Pamphlet

WHY does your firm run a suggestion scheme? To raise productivity; to improve management/staff relations? Whatever the reason, the results may not always come up to expectations. But, says the British Productivity Council, this is no time for despair, especially when an industrial force like the United States thinks it worthwhile to institute a National Association to promote the schemes.

As a short guide to the subject, the B.P.C. has produced one of its action pamphlets — some "suggestions about suggestion schemes." It is not intended as a handbook, but sources of fuller information are listed. The price is 1s. and the address, 21 Tothill Street, London, S.W.1.

Pensions Revision

ONE item discussed at the Harrogate conference for Works Councillors of Steel, Peech & Tozer (a branch of the United Steel Companies Ltd.) concerned recent changes in the company's pension scheme. This has been turned into a trust fund resulting in a decrease in administration costs. The money saved can now be used for increased benefit, and forms are to be issued to each employee so that he can signify his wish to change to the new scheme.

New conditions will now apply to the firm's long-service awards. Announcing these changes, the company's house journal, *Phœnix Gazette*, states: "In future, an employee who retires with 25 years' service will receive goods to the value of £25, and for each extra year of service the award will be increased by £1. When a man has served 40 years the award will have reached the maximum of £40 and he will be eligible to receive it without waiting for retirement. Should a man with 25 years' service or more be obliged to finish working through incapacity (as defined by the Pension Scheme) before retiring age he will be eligible for his award." If he leaves to take up other employment, however, he will not be eligible.

The changes also mean an increase in death benefits which now stand at £206. Employees with less than 5 years' service will receive £250; those with 5-10 years', £300; with 10-15 years', £350; and 15 years' and over, £400.

Birmingham Leads

ROSPA'S Sir George Earle safety trophy (a handsome silver Georgian inkstand), awarded annually for an outstanding achievement in industrial accident prevention, has been awarded this year to Birmingham and District Industrial Safety Group. The trophy, together with a commemorative plaque, was presented at the RoSPA National Industrial Safety Conference, held in Scarborough from May 31 to June 2.

The Group's safety training facilities for building and electrical workers have been mentioned recently in this journal. In making the award, however, RoSPA drew attention to its wider activities—"its initiative in establishing unique educational and training facilities for the benefit of all engaged in industry," and its "continual practical help and advice to industrial undertakings both large and small within its area."

The Group is sponsoring the Safety and Factory Efficiency Exhibition which will be held in the Bingley Hall, Birmingham, from the 14th to 21st of this month.

'Floors without Flaws'

THE main article in our April issue dealt with general cleaning and maintenance in the factory. Those readers who are particularly concerned with the maintenance of floors will be interested in a new booklet recently published by one manufacturer of floor maintenance machines, which covers the subject in detail.

"Floors without Flaws" gives an insight into floor composition, cleaning, suitability of surfaces, wear and warmth, and includes a comprehensive chart on initial treatment and regular care of floors in common use. It will be issued free to persons directly responsible for the maintenance of large floor areas. From Truvox Ltd., 15 Lyon Road, Harrow, Middlesex.

The Stroboscope—a New Training Tool for Industry

By G. O. SUTHERLAND

In the stroboscope we have a visual aid that can produce a desired optical illusion so that the high-speed operations of intricate machinery can be observed and explained while the plant is in motion. This feature describes some of its applications as a training aid in a modern technical college.

ONE of the most difficult tasks facing those responsible for works training, lies in putting across the working principles of such intricate machinery as certain machine tools, engines and many others, to people who may have little or no technical knowledge. The obvious way to impart the necessary know-how is by practical demonstration on working models, or in slow-motion on the actual mechanism to be studied. This method may be completely satisfactory; for instance the working cycle of a four-stroke petrol engine may be explained by turning a sectioned engine by hand through the successive stages of induction, compression, power and exhaust.

But it is another matter to demonstrate and explain the phenomenon of valve bounce on the same engine, since this only occurs at high speed. Obviously, slowing down the engine to a speed where the valve movements can be followed by the unaided eye destroys the conditions under which the phenomenon occurs.

This is only one example of many mechanical operations whose dynamic behaviour differs from their behaviour when static or when moving only slowly. Other common examples are textile machinery whose shuttle must operate at a certain minimum speed, vibratory sieves whose efficient operation depends on constant vigorous agitation, and machine tools of many kinds whose cutting efficiency depends directly on the speed of operation.

It is true that operations occurring too rapidly for the eye to follow can be filmed with a high-speed camera and later projected greatly slowed down, but this technique has severe limitations. Not only is it costly, but considerable time must elapse between filming and screening. This means that the effect of changes in operating conditions cannot be immediately seen, so that comparisons are difficult to make. Besides, they lack the "punch" of live demonstrations, which are so effective on operational training.

The modern stroboscope provides an answer to this problem. In its simplest form the stroboscope consists essentially of an electronic lamp which does not shine continuously but operates in a succession of regular, very brief but intense flashes. The flash rate can be adjusted to any required figure over a wide range.

Imagine a rapidly rotating disk viewed by the light of such a lamp. On the circumference of the disk there is one spot. If the lamp is arranged to flash every time the spot reaches the same position on its way round, that is to say, if the flash rate of the stroboscope is the same as the rotational speed of the disk, the disk will be shown up in the same position in every rotation. In practice, the phenomenon called "persistence of vision" will cause the images given by these separate flashes of light to merge into a continuous picture. The spinning disk will thus appear to be "frozen" or stationary.

If the flash rate is selected to be slightly lower than the rotational speed of the disk, then the disk will turn through slightly more than one revolution between successive flashes and the spot will therefore appear to advance slowly. In other words, the disk will appear to rotate in slow motion. On the other hand, if the flash rate is a little higher than the speed of the disk, the disk will appear to be rotating slowly backwards. (This explains why the wheels of a stage-coach or car in a film sometimes seem to be turning backwards; the shutter of the ciné camera acts like a stroboscope).

We thus have a tool which can be used to slow down, stop or even reverse any regular, cyclic or repeated motion, a tool which, with various refinements, opens up a whole new field in the technique of visual demonstration.

Fig. 1. Demonstrating the principle of the gyroscope by apparently stopping its motion with the aid of a stroboscope.

Fig. 2. By showing movements of valve parts in steady slow motion irrespective of true frequency of vibration, the slow motion stroboscope clearly shows up resonance.

The engineer has been making good use of the stroboscope for some time, not as an educational device, but as an aid to production and development. It has been found invaluable in the qualitative and quantitative analysis of high-speed mechanisms of many kinds. It also offers a convenient, rapid and accurate method of measuring the speed of rapidly rotating parts, without imposing any additional load on them, as does a tachometer. It is of particular value where inaccessible parts are concerned.

In these and many other ways, the stroboscope is now widely recognised as a valuable piece of industrial equipment. Now, however, as a result of experience gained in its practical application, its potentialities as a visual aid in technical education and operator training are being realised. The applications described here will perhaps point the way to its more widespread use in this field.

Looking at Gyroscopes

An interesting set-up at Willesden Technical College for instance, which has been used to demonstrate the nature and effect of gyroscopic action is shown in Fig. 1. Most of us have probably tried the simple experiment in which one holds a spinning bicycle wheel by its axle. Any attempt to move one end of the spindle relative to the other immediately results in an opposing force, which is known as gyroscopic action.

This effect is of wide importance in engineering, and its mathematical evaluation is therefore often necessary. To demonstrate to students the validity of such calculations in a way which no amount of theorising could do, a small electrically driven gyroscope is mounted in a gimbal. The speed can be varied and, by the addition of weights, the resistance to diversion from its normal axis (technically known as the "precessional couple") can be measured. An accurate method of measuring the rotational speed is essential, and this is achieved in the following way.

The gyroscope is viewed by the light of a Dawe Type 1,200 Stroboflash in which the rate of flashing can be accurately controlled within the range from 250 to 18,000 flashes per minute. If the stroboscope is adjusted until the spinning gyroscope appears to be stationary, then its rotational speed will be the same as the flash rate of the stroboscope which can be read directly off a dial on the instrument. The particular advantage of this method is that the behaviour of the gyroscope can be examined closely, and the speed can be accurately measured without the imposition of any external load which might affect the results of the experiment.

Although the upper frequency limit of the Stroboflash is 18,000 flashes per minute, it can be used to examine motions and measure speeds much higher than this, by running the stroboscope at a sub-multiple of the speed of the event studied. For example, if the lamp flashes only once for every five revolutions, then a dial reading of 15,000 r.p.m. would indicate a speed of 75,000 r.p.m. The practical upper limit is about 100,000 r.p.m., so that even high-speed grinding and gyroscopic operations can be analysed.

Vibration

The continual increase in mechanisation, and the ever higher power and speed of modern industrial equipment, has inevitably called greater attention to the problem of vibration which, if uncontrolled, can have such serious physical and psychological effects. Every object has its own natural

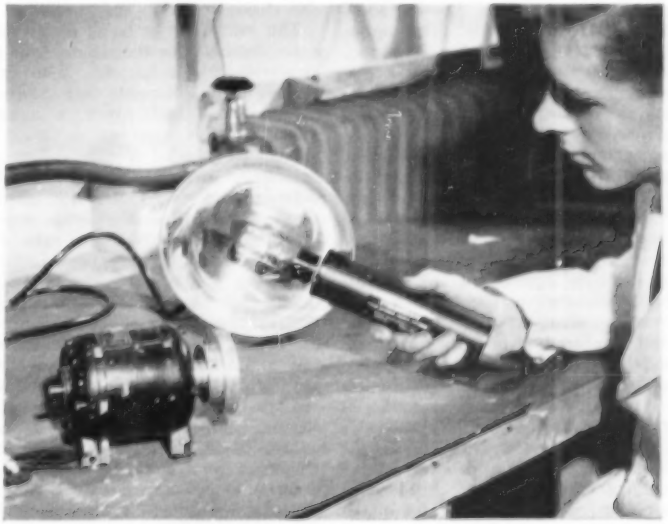


Fig. 3. A mains frequency stroboscope being used to measure the amount of slip of a small electric motor.

frequency of vibration, or "resonant frequency." If excited by external means at this frequency, the amplitude of its vibration increases very markedly. In the case of musical instruments, this is generally a good thing—it is the resonance of a violin for instance, which fills a whole concert hall with its rich, full tone. Undesired resonance, on the other hand, can usually be regarded as an evil to be suppressed. For example, a motor car may run very quietly except at one particular speed, at which the comparatively slight vibration created by the engine may excite, say, a door panel at its natural frequency. The result is an unpleasant drumming. Severe cases of resonance in engine parts may lead to early structural failure through fatigue.

Practical Method

As it is often difficult to calculate theoretically the natural frequency of a complex part, a simple practical way of determining resonance is of enormous value. Such a device is illustrated in Fig. 2. The article being studied in this case is a small electronic valve which contains many tiny and delicate components. The object of the test is to ensure that none of these parts will resonate at a frequency which lies within the range of vibrations likely to be encountered in the type of service for which the valve is intended, whether it be in military vehicles, in aircraft, or at sea. For this purpose the valve is mounted on a vibration generator used in conjunction with a Dawe 1206A Slow Motion Stroboscope. This equipment consists of a variable frequency oscillator and a high-intensity stroboscope. The oscillator also drives the vibration generator through a power amplifier.

In carrying out a vibration test or demonstration, the calibrated dial on the oscillator is swept through the entire range of frequencies from 10 cycles per second to 500 cycles per second which the generator provides. This range is sufficient to cover most normal vibratory conditions met with in modern practice. The stroboscope is not triggered at exactly the same rate as the vibration generator since this would make the valve components appear quite stationary, but is arranged to flash at a rate of ½, 1, 1½ or 2 cycles per second slower throughout the entire range. This will, of course, have the effect of making the entire valve assembly appear to vibrate at the pre-selected low speed of ½, 1, 1½ or 2 cycles per second irrespective of the true vibrational frequency. Should any of the valve components resonate, their amplitude of vibration will build up very markedly and the frequency at which this occurs can be read directly off the dial. It is, therefore, the work of only a few minutes to carry out a complete resonance search test on any component.

A great deal of industrial equipment driven by electric motors runs at or near mains frequency or a sub-multiple of this frequency. The Dawe 1207 Mains Frequency Stroboscope is an inexpensive but very useful instrument, which is, as its name implies, arranged to flash once for every cycle of the mains supply frequency which is normally 50 cycles per second.

Fig. 4. Time exposure of paper being printed at 750 feet per minute taken by the light of a stroboscope. A stationary image is seen despite the speed.

The instrument is being used in Fig. 3 to demonstrate the amount of slip in a two-pole induction motor under varying loads. Suppose that the motor is running at 2,800 r.p.m., a common speed for this type of motor. The mains frequency is 50 cycles per second, or 3,000 cycles per minute. The difference in speed, or slip, of 200 r.p.m. will result in the motor appearing to go backwards at this rate. The exact figure can easily be ascertained by using a stopwatch to count the number of "backward" revolutions in unit time, giving a direct indication of the degree of slip under the particular test conditions. The use of a stroboscope for checking slip has the advantage that it imposes no additional load on the motor and, since it is mains controlled, it operates from the same frequency source as the motor.

Stroboscopes can also be used to demonstrate in a graphic way the dangers of applying fluorescent lighting in conjunction with machine tools which run at or near a multiple or sub-multiple of the mains frequency. Fluorescent tubes are in fact stroboscopes which flash at twice the mains frequency, or 100 cycles per second. Early tubes sometimes had the effect of visually stopping or greatly slowing down the motion of dangerous machine tools. Accidents have occurred in which operators were injured by touching what they thought was a stationary or almost stationary part.

An interesting use of stroboscopes occurs in the printing industry and is illustrated in Fig. 4, which depicts paper running through a press at a speed of 750 ft. per minute, yet shows all details of the printed image quite clearly. This is achieved simply by mounting a pair of electrical contacts on the impression cylinder of the press, so that the Stroboflash (a high-intensity stroboscope) is triggered to flash once with every impression. The printed image will therefore appear stationary, irrespective of the operating speed of the press.

This is of great importance to the printing industry, since modern presses can run at far higher speeds than the speeds at which operators can check the impression by "following" it with the eye. Even the most skilled operator cannot check accuracy of colour register of print quality on presses running at more than 200 ft. per minute. To allow a high-speed press to run even for a few minutes in bad register would result in the waste of hundreds of yards of paper. The Stroboflood does not have its own speed control and is normally triggered by some part of the mechanism under examination. Alternatively, it can be controlled by the speed control unit of the Stroboflash where a more brilliant light than that provided by the latter is required.

Visual Aid

There are operations in every industry which are so complicated, or take place so quickly, that it is very difficult indeed to impart to the newcomer a real understanding of their nature. "Seeing is believing", and any means by which the demonstrator can slow actions down or stop them, without altering their basic nature, is of inestimable value in putting the story across. The modern stroboscope provides such a means, and when its potentialities as a visual aid are realised, this instrument will surely rank high among the accepted tools of industrial training and education.

Case history of a firm which has sought, with marked success, to build up an ideal working atmosphere. But it is by no means starry-eyed when it comes to choosing executives.

Two for One Plus Multiple Management

DURING a recent stay in the United States I took the opportunity to visit McCormick's and Co., one of the world's largest spice and flavouring extract houses. I had heard much about their system of management called "Multiple Management" which had been instituted by Charles P. McCormick, nephew of the original founder of the firm, and I had wanted to see it for myself.

I was not disappointed. The visit was both an intensely interesting and stimulating one. Three months later I am still arguing the pros and cons of the system to myself. A lot of what I saw and heard that day touches on fundamental problems to which our industrial society has not yet found satisfactory solutions. Are McCormick's leading along a trail which other businesses could successfully follow? I thought, therefore, that I would describe my visit to you and I hope that you will write and give your reactions to this unique approach to the management of people at work.

Their approach seems to me to possess two main ingredients. One we might label the deliberate creation of a certain kind of atmosphere, a "tone" of human relationships, or (as the psychologists would put it) a psychological climate. The other aspect is more easily defined and explained as a system of organising the management of the firm; a system which discovers managerial talent, and utilises it to the full.

The climate struck me before I had properly got through the entrance door. The impression it made on me deepened throughout the day and I must confess that "tuning in" to it and keeping in tune all day, required quite an effort of adjustment on my part. The words "To all who enter here we pledge faith not fear" engraved above the door set the tone. The bright and determinedly friendly conversation of the lift girl (known as the "elevator receptionist") as she took my host for the day and me up to the 7th floor, heightened the impression. Tea and spiced toast, served to us by girls in 16th century costume in the administrative section known as "Friendship Court", confirmed it. ("Friendship Court" is an authentic reproduction of a 16th century street which includes copies of the Stratford Grammar school attended by Shakespeare, Anne Hathaway's Cottage, the entrance to the library of St. John's College, Cambridge, and "Ye Old McCormick's Teahouse").

Throughout the day I was treated with the utmost courtesy, friendliness and tact. I was introduced to many people in the company including members of the different Junior Boards (more about these later) and a younger member of the McCormick family, who is working his way through the business.

I noticed all these people treated each other with the same kind of consideration.

Egotism Verboten

The word "unselfishness" was often used in the conversation and members of the Junior Boards told me that they were expected by Mr. McCormick to give some of their spare time to some project within the city community. The creation and maintenance of this atmosphere of warmth, friendliness and helpfulness was obviously "company policy." I found it was based on a slogan coined by Mr. McCormick and regarded as fundamental by all. "Two for one" he calls it, "Think twice for the company and other employees to every once for yourself".

The other main aspect of McCormick company policy is a system that goes by the name of "Multiple Management", based on the creation of Junior Boards for administration, works and sales. Fifteen years ago when Mr. McCormick took over the firm, it had been losing money for four years. One of his earliest actions was to call together 17 of his brightest young men and to tell them:—

"From here on you are my Junior Board of directors. Write your own constitution, elect your own officers, ask what questions you like. The company books are open to you. When you see something you think can be improved, argue it out among yourselves. Every idea you pass unanimously will be submitted to the Senior Board of directors. What you add to our profits you will share, and as long as I am here every senior member of the Board will come from amongst you".

Junior Boards

In this way the first Junior Board was formed and two others were established later. Each Board has an election every six months in which three of its members must be replaced by three new people. This ensures the widest possible encouragement of managerial talent.

The results have been impressive, and are attributed by members of the firm to Multiple Management. Other evidence from other sources would suggest, however, that the "atmosphere" which prevails, has also made a substantial contribution. McCormick's is now the largest spice business in the U.S.A. and the only one with a completely national distribution. Wages increased 10 per cent in the first year and sales increased 10 per cent. Over a period of three years wages went up another 42 per cent and production went up another 42 per cent. The introduction of tea breaks made a further production increase of 9 per

cent. The members share the increase of profits. A quarter of the increased profits go to the workers each year, half of this quarter go to all the employees and the other half goes to members of the Junior Board. The worker's wages have doubled and their income from wages and bonuses added together has trebled. Everyone is guaranteed a 48-week year and there are pensions and sickness benefits for all.

Can we evaluate the philosophy of the system? It is based on the theory that one in 10 of any factory population want to take responsibility and have the talent to do so. The Boards themselves use and look for this 10 per cent. Each member of the Board has the responsibility of scouting for people with potential talent and they are then given a six months' training period sponsored by the Board. Each six months members of the Board rate each other under the seven headings of Originality, Judgement, Achievement, Teamwork, Forcefulness, Stability and Human Relationships. Each time the three lowest rated members go off the Board, making way for three new people.

I asked members of the Board how they felt about the system. It was clear that it was felt to be very competitive. People on the Boards were watching their steps so that they would be rated highly by their fellows; people wishing to come on to Boards were working hard to make a good impression. A man's attitude to being thrown off a Board was considered to be an important factor in the assessment of his managerial capacity. As one of them said to me "If he works all the harder to get back on again, we know he's got what it takes".

So much for the 10 per cent élite. What of the other 90 per cent? There is no union at McCormicks; although unions are welcome to organise if they can, so far they have not attempted to do so. There is, too, no Joint Consultation as we understand it. Meetings of employees held from time to time appear to be very formal affairs with very little real influence.

Is this perhaps the realistic answer to the apathy of the many?—that ever present canker at the heart of democracy's rose? Or must we go on striving in these perilous days of accelerating technology to develop a greater sense of responsibility in every member of the community? Are the other 90 per cent doomed by their nature to be sheep? What do *you* think?

DISCUSSION LEADER

What Financial Facts Your Workers Want

(*Continued from page* 21)

BIM survey and set about satisfying the curiosity of millions of John Smiths.

When the survey asked the question, it received several answers. By far the largest number of companies believed that giving financial information is valuable because it encourages the employee to identify his own interests with that of the firm.

The second largest group said that it helped towards an understanding of the company and economic affairs in general, and in third place was the reply that it stopped rumours and removed misconceptions.

A small number found themselves morally obliged to give the information, but did not enlarge on the statement. If we assume that they acknowledged their employees' rights to share in the firm's destiny, as the remark suggests, we can combine these four (together with a minority view that it was good public relations) into the single concept of common interest and participation.

Other reasons given, like "to improve workmanship", "to help cut costs", and "profit-sharing is received with more enthusiasm", show on the surface a marked self-interest, which will not impress the employee, and may in the long run serve to alienate him completely.

When the survey enlisted the opinions of employees in the seven firms, it found them overwhelmingly convinced that "a company that is willing to give information of this kind will get co-operation more easily". For the trade unions, management's willingness is vital "not only to avoid unnecessary friction but to move towards a constructive association in which the trade union can actively participate in securing industrial progress. . . ."

There are many managements who believe, as the report puts it, "that nobody's job begins and ends with tending a machine". Yet there are still many more who show by a negative attitude that their employees are of scarcely more value than the machines they tend. If "common interest" is to mean more than just a catch-phrase revived only in times of industrial unrest, management will have to take this survey to heart.

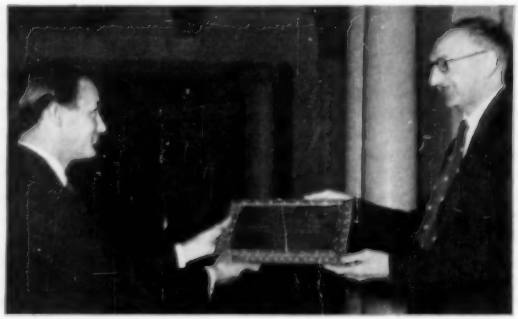
Copies of the survey, "Presenting Financial Information to Employees" (Price 21s.), can be obtained from Management Publications Ltd., Management House, 80 Fetter Lane, London, E.C.4.

House Editors Compare Notes

OVER 100 editors of house journals produced by Government departments and industrial and commercial organisations throughout Britain, met at Harrogate last month for the 8th Annual Convention of the British Association of Industrial Editors. It was opened by the Parliamentary Private Secretary to the Minister of Labour, Dr. F. B. Bennett, M.P. The Association's President, The Right Hon. Lord Crook, J.P., Chairman of the National Dock Labour Board, presided. A full report of the Convention will appear in our next issue.

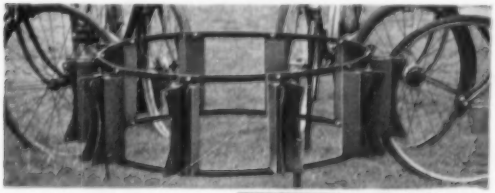
THE WINNER

For the second time in three years the Industrial Editors' Trophy for the best British house journal of the year went to "The Shell Magazine." Here the trophy is presented by BAIE chairman, Mr. John Durman, to Mr. John Tustin, deputising for the Editor, Mr. Kenneth Showler.



ABIX *Cycle Holders*

The ABIX Cycle Holder illustrated here has been designed for use in positions where our well known and popular types of cycle stand might not be convenient.
Robust and durable in construction made entirely of steel with a choice of stove enamelled or galvanised finishes.
The ABIX Cycle Holders will be found not only economical of space but remarkably quick and easy to use.
The front tyre is merely pushed between the spring actuated jaws of the holder when it becomes securely held and the cycle retains its normal upright position. The wheel does not come into contact with the holder and risk of damage to cycle, person, or clothing is obviated. If safety measures are thought desirable a lock and chain may be readily affixed by threading chain through holes provided in the jaws.



▲ ABIX Cycle Holders fitted on a frame of circular form some 3 ft. in dia. 10 cycles may be accommodated in this way with ample clearance between.

ABIX Cycle Holders ▶ fitted two sides of a wooden post, the four sides of which may be utilised if desired.

ABIX *Please write for illustrated catalogue:*

(METAL INDUSTRIES) LTD.

STEEL EQUIPMENT FOR OFFICE AND FACTORY

Taybridge House, Taybridge Road, Battersea, London, S.W.11

Phone: BATtersea 8666-7 *Gram: ABIX BATT LONDON*

all the answers about

PREMIUM SAVINGS BONDS

You can't lose a penny—your money back whenever you want it

★

Thousands of cash prizes must be won every month

★

Your Bonds go into *every monthly draw* (after you've held them for 6 months)

★

Each Bond can win you up to £1000 (free of U.K. Income Tax and Surtax)

★

The more you hold (maximum £500) the more your chances of winning

★

They cost £1 each at Post Offices, Banks & Trustee Savings Banks

Issued by the National Savings Committee, London, S.W.7

People at Work:—

Works Medical Service Goes on Shift

A ROUND-THE-CLOCK first aid service for employees has been provided by the Minnesota Mining and Manufacturing Co. Ltd. at Adderley Park, Birmingham. At a cost of £6,000 the company has built a new, air-conditioned works surgery fully equipped for the medical requirements of a large coated abrasives factory.

It is open continuously from 7 a.m., Monday until 12 noon, Saturday, treating up to 150 patients daily, and staffed on a shift basis by three State enrolled nurses and a general help. Also

Attractive premises have resulted in a marked increase in the numbers attending.

in part-time attendance is a doctor who, because of the chemical processes employed in the industry, has some specialised knowledge of skin ailments. The management is encouraging all its existing employees to undergo medical examination, and they intend that all new employees shall be examined before starting work.

Since the new surgery was opened there has been a marked increase in the numbers attending, which confirms the company's view that spacious premises which afford privacy and avoid the austere hospital appearance by means of bright, attractive décor, give employees greater confidence in the surgical staff and the treatments given.

A small waiting room, accommodating four patients, leads through a corridor to the main treatment room, two rest rooms, staff toilets, store and utility rooms. The main surgery includes an office, shower room, and an area which can be curtained off for treatment.

Interior decoration is in clear, vibrant colours with neutral shades for permanent fittings. Working units are faced with grey laminated plastic and there are black and white Terrazzo floors with black matt tiles in the toilets and store. All furniture is of tubular metal with blue-hide upholstery, and soft furnishings are in contemporary designs.

Electronic Aids

SOME of the latest electronic devices will help production in the new Ashford factory of Batchelors Peas Ltd. For grading alone 100 "electronic eye" machines have been installed. The aid of science is also being enlisted in the provision of oil-fired burners, practically smokeless, to ensure that the surrounding Kentish countryside is not polluted.

Welfare facilities, too, will be of a high standard, including a free overall and laundry service, canteen and cloakroom fitted with showers.

The company hopes to recruit most of its workpeople locally and from the surrounding districts of Canterbury, Folkestone and Hythe. Employees, both men and girls, will work on a five-day full-time two shift system—6 a.m. to 2 p.m. and 2 p.m. to 10 p.m.—working each shift alternately for one week at a time. This means they will draw a shift rate in addition to their basic wage, which should provide an added attraction to recruitment.

News Snaps . . . . . .

CELEBRATING their firm's centenary last month came easily to employees and pensioners of Peek Frean's Bermondsey factory. The sum of £40,000 in cash and kind was distributed amongst all workers with not less than eight weeks' service; all the company's pensioners received a round sum of £25 each. Another feature of the celebrations is a fête to take place on June 29 at the Eltham sports club with an exhibition on the past 100 years.

For the sixth time running, employees at the Associated Portland Cement Company's Barnstone works have completed a whole year free from accidents, bringing the total to 2,074,428 accident free man-hours—probably a world record. Last year each worker received a gift of £5 to mark completion of the fifth safe year; they have been promised £10 when they set up a ten-year record.

In Olavarria, Argentina, after a cement factory's safety committee gave 2,000 workers a luncheon celebrating the end of a year without accidents, over 1,000 came down with food poisoning. (Time.)

Now that the smaller type of £5 note is available, Birmingham employees of Triplex Safety Glass Co. Ltd. are to receive "fivers" in their pay packets. The notes will be included in all wages of £8 or over but not more than three will go into any one wage packet.

The report of the EPA mission on "methods of human relations training in the U.S.A." (Project 227) is now available from the European Productivity Agency, 3 Rue Andre Pascal, Paris 16.

Wealth of the Nations

This new ILO chart shows, despite popular belief, that we rank only in the fourth group of nations judged on an income per head basis.

BORAXO

(BRAXO)

cleans

DIRTY HANDS

Safely and Well

The dispenser is made of steel and will stand up to years of use.

Satisfied users of Boraxo include:—W. & T. Avery Ltd. · British Timken Ltd. · J. B. Brooks & Co. Ltd · Glacier Metal Co. Ltd · Jaguar Cars Ltd · Marsh & Baxter Ltd. · Rolls-Royce Ltd · Scribbans-Kemp (Bakeries) Ltd. · South Eastern Gas Board · Telegraph Condenser Co. Ltd · Vickers-Armstrongs Ltd.

Free trial

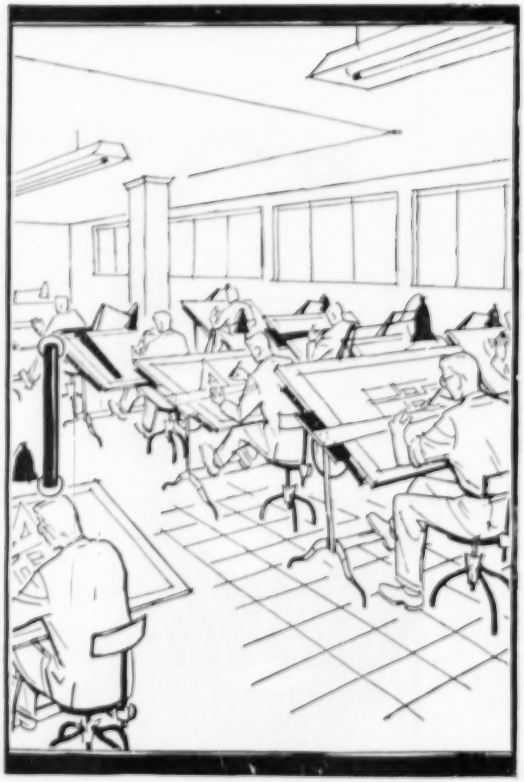
Give Boraxo a trial in *your* works. Attach this coupon to your letter heading for a free sample and full information

Name of Executive.....

BORAX CONSOLIDATED LIMITED

Borax House · Carlisle Place · London SW1 · *Victoria 9070*

The layout of your canteen will be planned behind this door



The best decision you'll ever make is when you call in Shepherd's.

They're experts in planning canteens from start to finish, and they do it entirely free — without obligation.

Starting with a blueprint, everything is taken into consideration — nothing is overlooked — every single piece of furniture is carefully selected for a reason: that reason is the ultimate efficiency, convenience, and working ability of your canteen.

Shepherd's manufacture tubular furniture that's really made to last; delivering direct to customer's addresses.

Take a close look at these illustrated examples, they explain more clearly than words how Shepherd's can plan for *your* canteen too. Floor size is no object.

An enquiry costs absolutely nothing. Our technical representative in your area will be pleased to give you the benefit of his experience.

Messrs. Armstrong Siddeley Motors Ltd., Coventry.

The General Electric Company, Ltd., Wembley, Middx.

H. C. SHEPHERD & COMPANY LTD.

Factory & Southern Sales Division:
HERSHAM STATION WORKS
Walton-on-Thames · Surrey
Telephone: Walton-on-Thames 6261 (5 lines)

Northern Sales Division:
274 DEANSGATE, MANCHESTER 3.
Telephone: Deansgate 7545

That "little extra" makes all the difference

What is it worth to give your executives and office staff preferential treatment? In this article Winifred McCullough examines one aspect of the recent IWS canteen survey.

THE old idea that the black-coated grades ate only from white tablecloths and must have waitress service is passing from the employee food service field as surely—if more slowly—than from the commercial restaurant and coffee bar. The cafeteria counter, with its gleaming steel surface, its tempting display of hot and cold foods and its sheer modernity is elbowing out the older, slower type of service with the written menu, attendant waitresses but none too hot dinners. The leather seated chairs in brown or black have given way to vinyl plastic in yellow, cherry, sky blue or jade green. The square wooden tables with cloths (dazzling on Monday, drab by Wednesday, unspeakable by Friday) are now round or oblong with pastel tops of laminated plastic.

Hard to Find

In a recent survey, 37 only out of 200 firms mentioned had waitress service for office staff. Waitresses are hard to find and harder still to keep. Even where a service charge is made, it does not begin to pay their wages. The following table from the same survey will be of interest:—

5	*firms charged*	*1d.*	*for*	*waitress*	*service*
1	"	"	*1½d.*	"	"
14	"	"	*2d.*	"	"
10	"	"	*3d.*	"	"
3	"	"	*4d.*	"	"
2	"	"	*5d.*	"	"
1	"	"	*6d.*	"	"

The true cost of waitress service is not easy to determine. It varies from full to partial waiting and, in many cases, the waitresses are partly engaged on other duties.

The following example, however, shows how unrealistic most service charges are:—

A dining-room serving 50 office staff five days weekly employs two part-time waitresses. They work from 10 a.m. until 2 p.m. laying up their tables, serving the meals and clearing away when the last dinner is finished. They are allowed 20 minutes for their own meal. At 3s. an hour, making no allowance for meals, uniforms or the behind-the-scenes help they receive, the cost weekly is £6. The customers each pay a service charge of 2d. or a total contribution towards waitress service of £2 1s. 8d. But in this case, 6d. a head would be the true service charge.

It would seem, therefore, that the ideal modern dining-room arrangements for office staff would be some variation of the following:—

1. A really attractive cafeteria service, offering food different from that sold in the works dining-room only in so far as the need for lighter, less filling meals is taken into account.

2. Tables ready laid up with cutlery, water jugs, glasses, cruets, etc.

3. Tea and coffee served from a trolley in the dining-room itself. Where large numbers are involved, the trolley can be wheeled from table to table. In smaller establishments customers come to the trolley at a fixed point.

Prices charged to office staff are usually not very much higher than those in the works dining-room. For a three-course meal, 2s. to 2s. 6d. are the prices most often seen. There is frequently a "low price special" for the person who does not wish to spend too much and one or two "top price specials" at the other end of the scale.

Faithful Patrons

Office workers are, on the whole, faithful patrons of the employee food service. Even in towns where other facilities are plentiful, 70 per cent of potential users is a fair average.

The most popular dishes in office dining-rooms also follow very closely the preferences of the works dining-room. In winter, tomato soup, steak pie, chips and peas, apple pudding and custard were first favourites in one large dining-room. In summer, ham and salad and roast lamb, mint sauce, potatoes and scarlet runners tied for first place, with apple pie and ice-cream way out in front in popularity. One manager said, "Coffee after lunch

Comfort, privacy and good taste—a dining room for executives at the Marley Tile Co. Ltd.

has real snob appeal in our dining-room".

An interesting point when planning a staff food service is that, on the whole, men like to sit over their lunch and the tables can only be used once in the meal period when custom is predominantly male. But women like to eat and go out so their seats can be used up to three times in the meal period.

One point on which all who are responsible for office meals agree is that they like to be a little different from the others. The extra service means a lot however little it is. They would rather eat in a dark little room of their own, than in the nicest, brightest canteen.

Changing Attitude

But this attitude, too, is subject to change and several American style cafeterias in which everyone from the yard sweeper to the managing director takes his tray into the same queue are operating successfully. Indeed, there is much to say in their favour.

In America, the idea of a separate dining-room for executives is a comparatively new one, but it is a very popular innovation. Executives used to (and many still do) use the ordinary works cafeteria or else they went out to lunch. Now many employers are setting up handsome waitress-served executive meal services. "Helps morale", "The boys get to know each other", "Makes for better time-keeping", "Gives leisure", "Half present lunch break spent getting there and back", "A good dining-room, nice service, helps to train young men in social skills", "Buys more food for their money". These are just a few of the reasons given. In this country there has been a tradition of "Managers' Rooms" for a long time and very pleasant places many of them are.

Executive dining-rooms are of two main types:—

1. The rather old-fashioned, cosy, clubby room with long tables, comfortable chairs, plain food, motherly waitresses. Here the tables are usually for six or eight or twelve and each seat sacred to a certain occupant. The visitor is introduced to everyone at his table and the uncommercial atmosphere is emphasised by rolls, butter, biscuits, cheese, soft drinks, fruit and sauces loading down every table. Sometimes, there is sherry, beer and cider laid out on the sideboard.

2. Tables for four, and an *à la carte* menu. Waitresses in pretty uniforms and bright pottery, pictures, curtains and flowers. This is less like a club and more like a high-class restaurant. There is probably a small bar just outside and the waitress will fetch you a drink from there.

Prices in both types of executive rooms are very low for the food and service offered. Indeed, the executive is sometimes far more highly subsidised than the other diners.

Prices for a three-course meal in 25 dining-rooms for management were recently given as follows:—

7 at 2s. 6d.	*5 at 3s. 6d.*
2 ,, 2s. 7d.	*2 ,, 4s. 0d.*
3 ,, 2s. 9d.	*1 ,, 4s. 6d.*
4 ,, 3s. 0d.	*1 ,, 5s. 0d.*

The figure on the bill is often, of course, much higher since many would take a four-course meal and most would take a cold beverage or coffee or both.

True costs are hard to ascertain. Food is mostly cooked in the main kitchen and collected by the waitresses as ordered or transferred to special hot plates for service. The numbers involved are so small compared to those in the main dining-rooms that too much emphasis on separating the cost would not be worth the time and trouble involved.

Subsidy Justified

There is ample justification for the subsidy if justification is needed. The executive uses his lunchtime as part of his working day in many cases and talks business or entertains business guests over the luncheon table. The position of the factory very probably deprives him of the kind of restaurant meal he would normally choose. He is often so pressed for time that a sandwich at his desk would be the only alternative to a meal in the dining-room. Also, when on the premises he can be called to the telephone, to see a visitor or to deal with a break-down or an urgent inquiry.

An Executive Dining Room —say Americans

- *Helps morale*
- *Provides much needed leisure*
- *Trains younger staff in social skills*
- *Buys more food for their money*
- *Makes for better time keeping*

Service with Style

NOWADAYS, gay colours in the canteen is accepted practice. Walls, curtains, tables, chairs, floors, ceilings and lighting have come in for lavish attention, while the counter display is as often as not a model of smartness plus efficiency. In all this effort, however, the women behind the counter are often overlooked, when the simple expedient of a bright, fashionable overall can make all the difference.

In this connection the news that Harrimonde Ltd. are now marketing fashioned nylon and Terylene overalls for women is of interest. These are in a variety of pastel shades and the latest models have tailored waists with double fastening, full flared skirts and piped lapels. Seams and hems are doubly reinforced and heat sealed where necessary.

Harrimonde Ltd., 43-45 New North Road, London, N.1.

Catering Topics

A section of the members of the Industrial Catering Association are in favour of changing the name of their association so that staff restaurants, departmental store canteens and hospital canteens may be embraced in the new title.

* * *

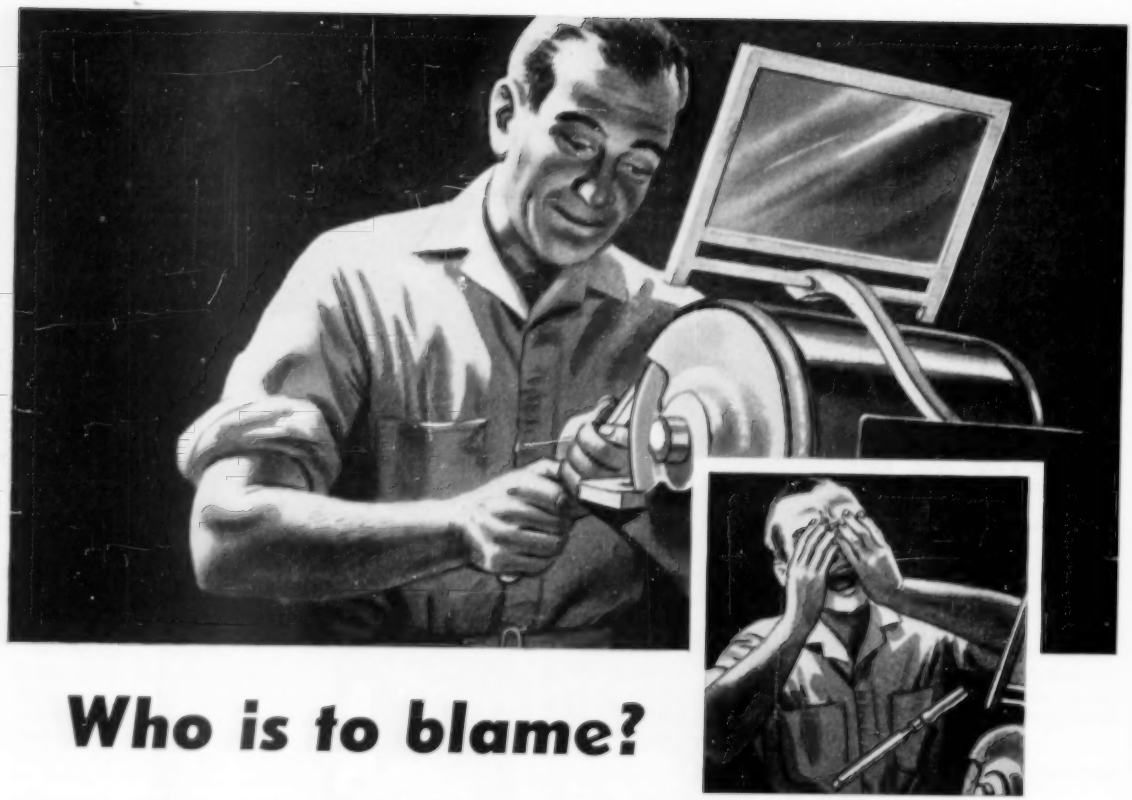
It is reported that Mr. E. C. Gezelle (London Transport Executive), national chairman of the Industrial Catering Association has been invited to lecture in the U.S.A.

Bartlett

—designers of Works Tea
Service schemes and manufacturers of high-class catering equipment

G. F. E. BARTLETT & SON LTD

MAIN WORKS: MAYLANDS AVENUE, HEMEL HEMPSTEAD. Telephone: BOXMOOR 4242
LONDON SHOWROOMS: BELL STREET, LONDON, N.W.1. Telephone: PADDINGTON 8222 S.B. 75
BIRMINGHAM: 12 Whitmore Road. Tel.: Victoria 1615. MANCHESTER: 530 Stretford Road. Tel.: Trafford Park 0288



Who is to blame?

Is it the employee for not taking the right precautions—or the employer for not driving home the importance of those precautions? It is estimated that more than 200,000* eye injuries alone, are caused in factories every year—the majority of them through carelessness. Everybody acknowledges the need for 'Safety First' in Industry but few put its principles into practice. 16 mm. FILM can bring this cautionary message home with a new sense of urgency. Film can implant such powerful images in the mind that its message will be remembered for years to come. Let film help remove the causes of accidents in *your* organization—let it help save time . . . money . . . and *lives*.

** Figure given in a recent Home Office report*

FILM drives home the importance of precautions

The G.B. Film Library offers a wide range of outstanding 16 mm. films—films dealing with Accident Prevention, Industrial Management, Sales Training, and many specific problems in Industry today.

A brief selection of 16 mm. films available on Accident Prevention

No. 1.	Organisation	Cat. No. IF.3814	B/W Hire rate 10/-
No. 2.	Machines	Cat. No. IF.3815	B/W Hire rate 10/-
No. 3.	Handling	Cat. No. IF.3816	B/W Hire rate 10/-
No. 4.	Falls	Cat. No. IF.3817	B/W Hire rate 10/-
No. 5.	Safe Clothing	Cat. No. IF.3818	B/W Hire rate 10/-
No. 6.	The Safety Supervisor	Cat. No. IF.3819	B/W Hire rate 10/-
No. 7.	Early Handling of Spinal Injuries	Cat. No. IF.3979	B/W Hire rate £1

Write now for literature and full details

G.B. FILM LIBRARY

Proprietors: RANK PRECISION INDUSTRIES (R.A.F.) LIMITED

DEPT. PM/6/57 · AINTREE RD · PERIVALE · GREENFORD · MIDDX · PERIvale 7481/9

Today's Ideas in NEW BOOKS ★ NEW FILMS

Collected Writings for Personnel Managers

THIS month's bookshelf is the department of coincidence. Two books have appeared, both of which are anthologies of articles on personnel management taken from American business journals. Both are well worth their space on the manager's bookshelf for two reasons: they present the views of a variety of authors in a handy, collected form; and, moreover, they are selections of the best American ideas in human relations expressed over a number of years. The first* represents the last five years of the *Harvard Business Review*, and the second† is culled from the many issues of *Fortune* since it was first published in 1930.

The best American authors manage to avoid the cold treatise style of presentation; they tend to dramatise the subject, to capture the reader's imagination with a vigorous, colloquial approach.

This may seem like forsaking the personnel field for the theatre, but, on the contrary, it is getting as close as possible to the real battleground of human relations. That is what human relations really entails—a drama, however small, enacted between people. The employee is not a dry, statistical unit and neither is the boss. Their arguments, until they turn them into official reports, are colloquial expressions of their own points of view.

So, when a worker is quoted as saying: "He uses people to make money for him . . . keeps you at it all day long." the author is not wallowing in the vulgar or comic. As every personnel manager knows, that is exactly the way he hears it every day of his working life. It is all very well to write academically on the subject, but neither the workshop nor the manager's office are academies. They are places of work where people are thrown together and have to make the best of it. It is the personnel officer's job to see that they do.

American authors not only grasp this point; they act upon it. And whether the reader accepts or rejects the ideas underlying their writings, it is safe to say he will never regret having read them.

* Human Relations for Management. Edited by E. C. Bursk. *Constable*. 27s. 6d.
† Readings in Personnel Management from *Fortune*. Edited by William M. Fox. *Henry Holt & Co., New York*. $1.50.

In-plant Training for the Unskilled

The Training of Workers Within the Factory. *O.E.E.C.*, 6s.

THE unskilled or semi-skilled worker is not a product of the technical school or the apprenticeship scheme; he develops at his work bench; and it is a fact which industry cannot ignore that for the sake of efficiency and productivity he must be trained for the job he has to do. The idea is a fairly modern one. In the past, although management agreed that what minor skills he did have were essential to industrial efficiency, it still believed that he could pick these skills up in the course of his work with little or no assistance.

Two years ago the European Productivity Agency of OEEC began a survey of TWI in seven countries—Britain, Austria, Belgium, West Germany, France, Holland and Italy.

This publication is a study of current practice throughout the seven countries in systematic in-plant training. Training of craftsmen has been excluded from the main survey for obvious reasons; so have training facilities in technical schools and centres, with the exception of those which are an integral part of a single industrial scheme.

To make their investigations, field workers visited almost 700 different establishments, recording training methods, which fell within a necessarily loose definition, the main classification being that the jobs studied should be in manufacturing industry and that the recognised training period should be no more than three years.

Methods and organisation of training are reasonably well covered, and, for comparative study, training for skilled work is also summarised in a separate chapter. In this respect the report will certainly be of greater interest to the training officer or production executive (for whom, admittedly, it is intended) than to the personnel manager. For the latter's particular interest some attention has been paid to the transition from the training course to the production line. This second stage of induction can be the cause of many difficulties in human relations, and it is a pity that it is allowed only three pages.

Say It With Film!

THE North Thames Gas Board has recently completed its first series of magazine films which are designed to record the historical developments and the normal business and social activities of the Board and its employees. The series comprises three films with a running time of about 10 minutes each. They are in black and white for two reasons: first, expense and, second, black and white films make it possible to "shoot" in newsreel style in situations and at times of day when colour would be impossible.

Magazine No. 1 is not a true magazine but an historical record which deals with the visit of the chairman and deputy chairman of the Gas Council to various of the Board's installations around London. Magazine No. 2 shows the Gas Stand at the Schoolboys' Own Exhibition and the Gas at Work in Industry Exhibition staged for the first time this year. Magazine No. 3 is a true magazine and is made up of four items: the introduction of Cleanglow fuel, a works first aid team demonstration, a visit to the Acton sports ground, and the development of the river front and new coal stocking ground at Beckton.

These magazines are intended mainly for distribution within the Board as industrial relations films, and, as a start, are being shown to works committees and staff consultative committees. But it is intended to show them in any clubroom or canteen where it is possible to put on a show, the aim being "to bring the staff to the staff".

As films, these magazines are, of course, nothing remarkable and the subject matter is unlikely to interest anyone outside the gas industry. What is of great significance is the idea behind them, for, in a sense, the magazines are intended as a supplement to the Board's house journal. It is an idea likely to spread to other large organisations already in the habit of making films of special events in their history.

The one great snag is: "When and where would we show them?" Industrial relations may be one of industry's paramount problems but one can hardly visualise any firm regularly carving half-an-hour or so out of its production time in order to put on a film show. Nor, alas, is it likely that workpeople will give up their evening pursuits to visit such a show. The only practicable solution, therefore, is the lunch-hour with the canteen temporarily converted to a cinema. Even then, success would not necessarily be assured, for people very understandably look upon this period of the day as a time totally divorced from the job and everything connected with it.

PARK YOUR CYCLES THE ODONI WAY

(REGD. TRADE MARK)

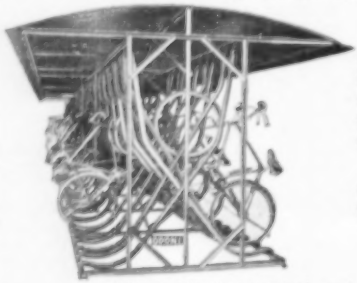
With Odoni Patent "All-Steel"

BICYCLE STANDS

Types to suit all possible requirements

SINGLE OR DOUBLE-SIDED, HORIZONTAL OR SEMI-VERTICAL

For Indoor and Outdoor use



TYPE 10

DOUBLE SIDED SEMI-VERTICAL OUTDOOR STAND, BUILT WITH CLOSE RACK ARRANGEMENT (CYCLES AT 12" CENTRES)

Write for fully illustrated leaflet and price list to Sole Manufacturers and Patentees

ALFRED A. ODONI & CO. LTD.

SALISBURY HOUSE, LONDON WALL

Tel. No.: LONDON, E.C.2 Tel. Add.:

NATional 8525/6 (WORKS: LONDON, N.W) Odoni, Ave. London

If you need executive staff!

☆

Personnel Officers

Canteen Managers

Industrial Safety Officers

Welfare Officers

☆

Then you need the classified columns of

PERSONNEL MANAGEMENT & METHODS

Rate: 3/- per line, minimum 6/-; average 24 letters per line, box numbers to be paid for as 2 lines. Display panels: £1/15/- per single column inch.

Send your advertisement to: Advertisement Manager, PERSONNEL MANAGEMENT & METHODS, Mercury House, 109/119 Waterloo Road, London, S.E.1. Tel.: WATerloo 3388.

British Transport

1957 Film Catalogue

listing over 100 films on travel and transport subjects

Write for your copy *now* to the Films Officer

British Transport Commission · 25 Savile Row London W1

Summary of Official Publications

GENERAL

Choice of Careers, New Series No. 37. The Welder and Cutter. *H.M.S.O.* 1s. 3d.

Report of Court of Inquiry into dispute between members of the Shipbuilding Employers' Federation and members of Trade Unions affiliated to the Confederation of Shipbuilding and Engineering Unions. Cmnd. 160. *H.M.S.O.* 1s. 3d.

Report of Court of Inquiry into dispute between members of the Engineering and Allied Employers' National Federation and members of Trade Unions affiliated to the Confederation of Shipbuilding and Engineering Unions. Cmnd. 159. *H.M.S.O.* 1s. 3d.

Accidents at Factories, docks, building operations and works of engineering constructions. How they happen and how to prevent them. Vol. 31, April, 1957. MoL. *H.M.S.O.* 1s. 3d.

The Importance of Thermal Insulation in Building. Ministry of Works Technical Notes No. 3. *H.M.S.O.* 6d.

National Health Service Superannuation Scheme. Allocation of Pension; explanatory memorandum with tables prepared by the Government actuary. Booklet A.L. Dept. of Health for Scotland. *H.M.S.O.* 1s. 3d.

Training of Workers within the Factory. Survey of Industrial in-plant training programmes in 7 European countries. *Project No. 179.* O.E.E.C. Sold by *H.M.S.O.* 6s.

Economic Survey of Europe, 1956—studies of transport problems and income distribution in Western Europe. United Nations. Sold by *H.M.S.O.* 18s.

STATUTORY INSTRUMENTS

No. 225. The Wages Regulation (Laundry) (Amendment) Order, 1957. Dated February 14, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act 1945 (a). *H.M.S.O.* 3d. Increases statutory minimum remuneration fixed by 1956 Order. Effective from March 4, 1957.

No. 276. The Wages Regulation (Cotton Waste Reclamation) Order, 1957. Dated February 21, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act 1945 (a). *H.M.S.O.* 4d. Sets out statutory minimum remuneration payable in substitution for previous Orders which are revoked. Effective from March 8, 1957.

No. 287. The Wages Regulation (Keg and Drum) (Holidays) Order, 1957. Dated February 22, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act 1945 (a). *H.M.S.O.* 5d. Sets out the holidays which an employer is required to allow to workers and the remuneration payable for those holidays in substitution for previous Orders which are revoked. Effective from March 11, 1957.

No. 376. The Wages Regulation (Aerated Waters) (Scotland) Order, 1957. Dated March 7, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 3d. Sets out the statutory minimum remuneration payable in substitution for that fixed by previous Order now revoked. Effective from March 22, 1957.

No. 377. The Wages Regulation (Paper Bag) (Holidays) Order, 1957. Dated March 7, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 6d. Sets out holidays which an employer is required to allow workers in the above industry in substitution for those given in previous Orders and amendments. Effective from March 25, 1957.

No. 443. The Wages Regulation (Hat, Cap and Millinery) (Scotland) (Amendment) Order, 1957. Dated March 18, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. Increases statutory minimum remuneration payable to workers in the above industry. Effective from April 3, 1957.

No. 473. The Wages Regulation (Rope, Twine and Net) (Amendment) Order, 1957. Dated March 21, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. Increases statutory minimum remuneration payable to workers in the above industry Effective from April 5, 1957.

No. 558. The Wages Regulation (Boot and Shoe Repairing) (Amendment) Order, 1957. Dated March 29, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 5d. Increases statutory minimum remuneration payable to workers in the above industry, and specifies circumstances in which a worker shall not be entitled to accrued holiday remuneration or shall be entitled to only a reduced amount, at the termination of employment. Effective from April 17, 1957.

No. 566. The Wages Regulation (Jute) (Amendment) Order, 1957. Dated April 1, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, minimum remuneration payable to workers in 1945 (a). *H.M.S.O.* 5d. Increases statutory minimum remuneration payable to workers in the above industry. Effective from April 15, 1957.

No. 593. The Wages Regulation (Baking) (England and Wales) Order, 1957. Dated April 4, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 6d. Sets out statutory minimum remuneration payable to workers in the above industry, in substitution for previous revoked Orders. Effective from April 29, 1957.

No. 594. The Wages Regulation (Baking) (England and Wales) (Holidays) Order, 1957. Dated April 4, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 6d. Sets out holidays and remuneration payable for those holidays in substitution for those fixed by previous Orders. Effective from April 29, 1957.

No. 663. The Wages Regulation (Milk Distributive) (Scotland) Order, 1957. Dated April 11, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 4d. Sets out statutory minimum remuneration payable to workers in the above industry in substitution for previous Order. Effective from May 1, 1957.

No. 684. The Wages Regulation (Hair, Bass and Fibre) Order, 1957. Dated April 17, 1957, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 5d. Sets out statutory minimum remuneration payable to workers in the above industry in substitution for that fixed by previous Order. Effective from May 3, 1957.

Management Diary for June

BACIE

2-7 **Roffey Park Institute, Horsham, Sussex.** Residential course for education and training officers. (Joint course with IPM, IWS and NIIP.)

July 3 **Festival Hall, London.** The importance to industry and commerce of advance planning for the increased numbers of school-leavers over the next ten years. Conference for directors.

BURTON MANOR

10-14 Expressing yourself in writing and speech.

INDUSTRIAL WELFARE SOCIETY

Non-residential Meetings at Robert Hyde House

4-5 Discussion group leading. An introductory course.

13 Public relations and communications in industry. One-day conference.

19 Pension fund investment. One-day conference.

20 Elementary principles of employee catering for the smaller establishment. One-day course.

5 "New Thinking" Luncheon: Some impressions of industrial relationships in five African countries. Speaker: Mr. John Marsh.

INSTITUTE OF INDUSTRIAL SUPERVISORS

14-16 **Missenden Abbey, Bucks.** Human Relations.

21-23 **St. Ann's Hotel, Buxton.** The Foreman and Cost Reduction.

INSTITUTION OF PRODUCTION ENGINEERS

30-July 3 **Harrogate.** Automatic Production—Change and Control Conference.

NIFES

3-8 **Prestatyn Holiday Camp, North Wales.** Routine testing and operation in relation to factory fuel consumption. Refresher course for works and plant engineers.

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY

3-7 Five-day course in selection methods, part III.

13-14 Two-day course in staff reporting and merit rating procedures.

17-21 Five-day course in selection methods, part I.

27-28 Two-day conference on selection methods.

RESIDENTIAL COURSES FOR GIRLS

1-8 **Kilmory Castle, Argyllshire.** Course for girls being considered for promotion.

SUNDRIDGE PARK

12-14 The impact of computers and automation on management. Three-day residential course for senior executives.

16-July 6 Measurements for Management. Three-week residential course for senior executives.

URCHFONT MANOR

17-23 The human factor in production. Course for foremen, chargehands and union representatives.

EXHIBITIONS AND CONVENTIONS

14-21 **Birmingham.** Safety and Factory Efficiency Exhibition.

17-27 **Olympia, London.** Business Efficiency Exhibition.

17-21 **Eastbourne.** Ninth British Electrical Power Convention and Exhibition.

METROPOLITAN COLLEGE

Specialised Postal Tuition—Taken at Home in Leisure Time—for the Membership Examination of the

INSTITUTE OF PERSONNEL MANAGEMENT

Also interesting, authoritative (non-examination) postal tuition in Personnel Management, Economics, Business Administration, Industrial Law, Statistics, Social Administration, etc.

Send today for free prospectus, mentioning exam. or subjects in which interested, to the Secretary, GI/85, Metropolitan College, St. Albans (or call at 30 Queen Victoria Street, London, E.C.4).

ST ALBANS

THE ADMIRALTY HAS APPROVED . . .

protective clothing made with GEON PVC

An Admiralty spokesman talking on the B.B.C. stated that the Royal Navy was 'abandoning the old oilskin coat in favour of PVC garments'.
Royal Navy personnel are now gaining extra protection by using foul-weather clothing made with Geon PVC.

Protective clothing made with Geon PVC
. . . resists salt water attack.
. . . is durable and long wearing.
. . . allows full freedom of movement.
. . . stows wet without cracking or deteriorating.

Geon PVC is used at sea in oilskins, floor covering, cable sheathing, and floats. For further information please write for descriptive booklet No. 18 free on request.

Geon
Polymer Materials

'Geon' is a reg'd trade mark.

BRITISH GEON LIMITED

Sales and Technical Service

DEVONSHIRE HOUSE PICCADILLY LONDON W1 · TEL: MAYFAIR 8867

EFFICIENCY ★ GOOD HOUSEKEEPING ★ WELFARE ★ SAFETY ★ CANTEEN

Firms with new products for better, safer working in industry are asked to send details to the Editor with, if possible, an illustration.

Efficiency Aids

ACCOUNTS IN TRIPLICATE

THE main essential of this "three-in-one" wages system is the producing of three records by one writing—the personal record sheet, the wages sheets and pay slip sheets.

The three record forms are placed on a billing board as follows. First, place the pay slip sheet over the pegs on the billing board after lifting the spring clip. Next, place a wages sheet immediately on top on the pay slip sheets. Select the appropriate personal record sheet, align correctly, insert the carbon paper and release the spring clip which holds the sheets securely in position.

Write up the wage calculations and, if necessary, time analysis details on the personal record sheet, and the impression is carried through by the carbon paper to the other sheets, thus producing three records by one writing.

A most important feature is that analysis columns appear after the "Gross Amount of Wages Due" column which are ideal for non-taxable allowances granted to various trades such as "travelling allowance," "subsistence allowance", "tool allowance", and so forth.

Percy Jones (Twinlock) Ltd., Chansitor House, Chancery Lane, W.C.2.

PORTABLE REFRIGERATOR

A NEW lightweight portable cold-room, which can be erected anywhere by anyone, is now available in Britain, and for export. Constructed of 7 ft. x 7 ft. aluminium 100 per cent insulated sections, each weighing only 85 lb., the *Walk-in-Freezer* is assembled by simply turning patented screws into carefully designed holes and slots.

Fitted outside is a hermetically sealed fractional horsepower compressor unit, using less than 1 unit of electricity per hour, pre-set to maintain the required low temperature to suit whatever product is stored. Models for zero and sub-zero temperatures are available and humidity control and defrosting may also be fitted if required.

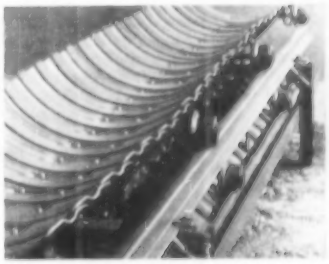
The primary consideration in the design has been for refrigeration with complete, uninterrupted insulation at low cost to the purchaser. Frost heave has been eliminated and, by virtue of its portability, the *Walk-in-Freezer* does not become a fixture. As it is constructed of aluminium or galvanised sheet, the cold-room may be installed in an open yard without fear of deterioration. Knocked down into a crate, it occupies only 98 cu. ft. of shipping space, thereby minimising handling and freight charges for both export and internal transit.

Messrs. Penfold & Partners, 120-122 Victoria Street, London, S.W.1.

CAPACIOUS CONVEYORS

THESE all-steel conveyors, until recently manufactured in Germany only, are now in production in this country. Besides being able to negotiate curves, they can convey materials, such as dry sand, up gradients of 32°, handle hot materials with "on loading" heats of 1,292° Fahrenheit, and allow for additional units to be inserted in small sections to increase the total length of the conveyor.

The conveyors consist of a series of overlapping curved steel pans attached each to the other by a centrally positioned, steel linked driving chain located below rail level. Brackets are fitted to the steel pans at given intervals. To these brackets are bolted spindles carrying rollers mounted on anti-friction bearings with special seals that eliminate re-greasing. These rollers move with the pans on a track made from standard narrow-gauge rails. The central location of the driving chain together with the overlapping of the pans protect it from damage by the material being conveyed.



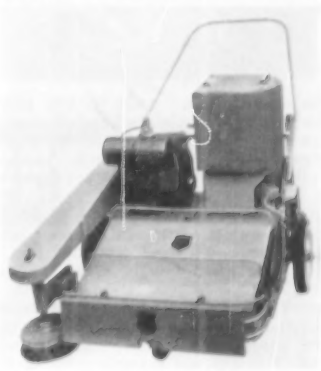
The curved design of the steel pans allows a very high bulk carrying capacity in relation to their width, and the change from straight to curved operation requires only a given number of swivel links in the driving chain and the bending of the rails to give the necessary curve. The conveyors are operated by an electric motor through a worm drive and, except for special installations, no permanent foundations are required; all that is needed is a reasonably level site.

Wharton Engineers (Elstree) Ltd., Watford Road, Elstree, Herts.

Good Housekeeping

CLEANS BY ITSELF

THIS light, easy to handle mechanical sweeper will enable an "old hand" to clean the shop floor really efficiently. The operating mechanism is simple and once the engine is started the driving



wheel always revolves but is held free from contact with the floor. When the operator wishes to begin sweeping, he merely has to press down the handlebars gently and the machine will travel forward at a comfortable walking pace. To stop it, he raises his hands and it promptly comes to a standstill.

The sweeper is powered by a four-stroke engine, cooled by turbo blower. It weighs under 2½ cwt. and is fitted with 24 in. wide brushes, in renewable sections, with a *quick*, easy adjustment to take up brush wear.

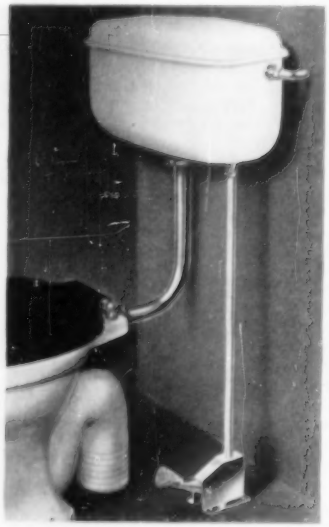
The swept material is thrown up into a container. The gully brush deals with awkward corners and flings the sweepings in front of the main brushes. An optional extra is a four-gallon tank. The over-all dimensions are: length, 5 ft. 10 in., and width, 3 ft. 2 in.

John Allen & Sons (Oxford) Ltd., Cowley, Oxford.

Welfare

NO-HANDLING HYGIENE

FOR the improvement of hygiene in hospitals and works' first-aid quarters (although its hygienic properties would be an asset to any toilet) the Fordham pedal-operated cistern has been developed. Fitted with a neat, completely enclosed foot-operated flushing mechanism, it flushes smoothly at the touch of the foot. Its chief attraction is, obviously, that it removes the possibility of infections being spread through hand contact.



It is available with either "Cleanline" or panel-type cisterns, both of which incorporate the Fordham all-polythene syphon and ball float which are, the makers claim, virtually indestructible, will not corrode even in acid and cannot jam even in extremes of heat or cold.

Fordham Pressings Ltd., Dudley Road, Wolverhampton.

FASHION AT WORK

LIKE his leisure clothes, a man's working wear changes little from year to year. But for a woman, even an industrial overall must be stylish and feminine, as well as practical.

In drawing attention to this often overlooked fact, Sketchley Overall Service give news of their latest "creation". The change consists in the gradual introduction of a woman's overall with a wider skirt which gives better coverage when the wearer is seated, and also allows for the more *bouffant* skirts of summer dresses and waist slips.

This overall can be had in green, beige, royal blue or white. It has a narrow half-belt fastened with a round buckle at the centre-back.

Sketchley Overall Service, Sketchley Dye Works, Fox Grove, Old Basford, Nottingham.

Safety

FOR NON-SLIP LOADING

THE *Talurit* safety sling, the makers claim, provides absolute safety for all "slung" merchandise and is most effective when handling high quality or fragile products. Specially-made rubber

sleeves, coupled with remarkable flexibility, ensure a perfect grip on all loads, even those with the most irregular contours.

The life of the sling is practically limitless owing to a simple construction which allows for easy and economical repair. Designed to a safety factor of 8:1, they can be supplied in any width, length and lifting capacity, with or without the patented *Talurit* shackle, and a proof loading certificate is issued with each one.

Cable Covers Ltd., "Talurit" Division, St. Stephen's House, Westminster, London, S.W.1.

POCKET-SIZE PROTECTION

AN entirely new and revolutionary approach to eye protection is demonstrated in the *Itex* Safety Spectacle No. 424. The frame is made from strong pliable nylon, and, with transparent protective eyeshields, it is

collapsible, designed to fit into the pocket.

Specially strengthened, curved acetate lenses are fitted, which the manufacturers have designed in a more appealing shape offering greater visual area, whilst affording extra coverage at the circumference of the lens where protection is vital. Made from non-inflammable materials, the *Itex* 424 weighs only ¼ oz.

Safety Service Company, 34a Stonebridge Park, London, N.W.10.

ROBUST AND STEADY

THIS safety ladder weighs only 23 lb., takes up little space and is claimed to be virtually indestructible. Its main framework is in tubular steel with three fixed timber treads and top platform of thick selected beech. The height from ground to top platform is 3 ft. 6 in.

When reaching from the top platform, the handrail exercises a steadying influence, while for decorators this rail provides a convenient device for hanging paints and brushes.

Fabrique du Metal, Lower Hampton Road, Sunbury-on-Thames, Middlesex.

GUARDED HEATING

OUR December, 1956, issue contained a description of the G.E.C. 1½ and 3 kW. overhead radiant heater. The makers can now supply a guard for the heater, particularly suitable for industrial installations where damage to the heater might occur.

The strong wire guard is slid into position from one end of the heater and securely held at the sides of the reflector. No screws are required. A stop is incorporated at one end of the guard to prevent it from slipping off a heater mounted in a vertical position. Cost is 40s.

General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2.

Canteen

ICE-FRESH IN 7 SECONDS

NOW on the market is an automatic machine for dispensing iced drinks, which resembles a large household refrigerator and contains enough ingredients for 600 drinks. Each drink is freshly mixed and poured into a paper cup upon insertion of the necessary coin; time taken to dispense one drink is 7 seconds. These machines are being installed in factories throughout the country by the operating companies who keep them serviced and filled.

Chadburns (Liverpool) Ltd., Vendor Sales Division, 3 Wilton Place, London, S.W.1.

DRINKS ON THE NEVER-NEVER

RENTAL and hire purchase schemes are being operated by one firm of vending machine manufacturers to supply large concerns with automatic coffee and soft drink machines. The coffee machine serves up to 500 cups, and the bottle vender has a capacity of about 95 bottles.

The rental scheme covers four years, the purchaser paying £37 down and £4 0s. 2d. a month for the soft drink vender, and £66 down with £7 4s. 2d. for the coffee machine. The hire purchase scheme requires a down payment of 50 per cent and 24 monthly instalments.

Coolers and Venders, 35 Berkeley Square, London, W.1.

NEW ADDRESSES

SAFETY PRODUCTS LTD., makers of industrial respirators, goggles, etc., have closed their London office and moved to Redhill, Surrey, where last summer they transferred their warehouse and offices. Manufacturing and administration are now housed in one building, and all communications should be addressed to Holmethorpe Avenue, Redhill, Surrey (Tele: Redhill 4304/5).

* * *

General Cleaning Contractors Ltd. have now moved to Boundary House, 56/58 Worship Street, London, E.C.2 (Tel.: BIShopsgate 6544).

NEW TRADE LISTS

Design, Research, Production. (*E.M.I. Electronics Ltd., Hayes, Middlesex*). Abridged catalogue of measuring, industrial and communications equipment.

* * *

Glenhill Office Furniture. Price list No. 104. (*J. E. Lesser & Sons Ltd., Green Lane, Hounslow, Middlesex*).

the skilled workers you want take the working man's own paper!

GET THEM THROUGH THE CLASSIFIED COLUMNS OF THE

DAILY HERALD

RATES: All Editions ... ... 20/- per line
Southern Editions ... ... 17/6 per line
Northern Editions ... ... 8/- per line

Phone Temple Bar 1200 (Ext. 452-8), or M/c Central 3232 (Ext. 75)

Classified Advertisement Manager, DAILY HERALD, Acre House, Long Acre, London, W.C.2, or 2/4 Oxford Road, Manchester 1.

TOSAVA'S

Incorporating

- The famous SPA-TAN waterproof Chrome soling which wears twice as long as ordinary leather.
- Our exclusive and unrivalled NEOPRENE sole with the Welland anti-slip pattern. Resists oils, heats and acids. Wears for months.
- Commando Rubber Soles for heavy duty.
- Fashionable and attractive shoes for ladies.

NOW SAFELY ESTABLISHED

as

A WISE CHOICE

for

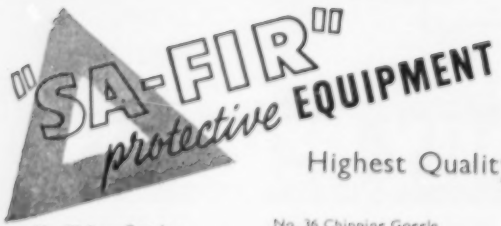
FOOT PROTECTION

Write for full details to—

BRIGGS INDUSTRIAL FOOTWEAR LTD.

17-23 DOVER STREET LEICESTER

FOR SAFETYS' SAKE INSIST ON TOSAVA'S



COMPLETE RANGE OF
GOGGLES
VISORS
SPECTACLES
FACE SHIELDS
ASBESTOS CLOTHING

Highest Quality at Lowest Cost

No. 27 Dust Goggle

No. 36 Chipping Goggle

No. 50 Welding Goggle

CHAPMAN & SMITH LTD. HOLDERS HILL CIRCUS, LONDON, N.W.7

CLASSIFIED ADVERTISEMENTS

CATERING

Boilers, Steamers, Cookers, Bains Marie, Peelers, Slicers, Hot Cupboards, Café Sets, Refrigerators, Dishwashers, Stainless Steel Sinks and Fabrications, etc.
Our prices for new and rebuilt equipment are keenest in the trade, every item carrying full guarantee.
Horwood Catering Equipment Ltd.
6/8 Stroud Green Road, London, N.4.
Tel.: STA 3250/8/9

Nesting Chairs, 1,100 available, brand new, tubular steel, finished top-quality stove enamel, seats and backs shaped laminated polished ply, at 29s. each, in minimum lots of 50.
Horwood Catering Equipment Ltd.,
6/8 Stroud Green Road, London, N.4.
Tel: STAmford Hill 3250/3258/9.

EMPLOYMENT AGENCY

AVIAN APPTS. AGENCY. All staff for all jobs. Male & Female. Permanent & Temporary. 109 Tottenham Court Road, W.1. EUSton 8406.

SITUATIONS WANTED

DOCTOR DESIRES POST as part-time medical officer to industrial/commercial company, 1, 2 or 3 sessions weekly, highly experienced, London or home counties. Reply: Box No. 141, Personnel Management & Methods, 109/119 Waterloo Road, S.E.1.

WOOLWICH POLYTECHNIC

Department of Commerce and Management Studies

Short Full-Time Management Courses

Reservations are now being accepted for the following Courses for the Session 1957 to 1958:

Production Planning and Control—3-week Courses

For Production Planning and Control Executives.
No. 1 Commences 9th June, 1958.

Industrial Engineering (Work Study)—4-week Courses

Concentrated Practical Courses for Executives.
No. 1 Commences 23rd September, 1957.
No. 2 Commences 18th November, 1957.
No. 3 Commences 3rd February, 1958.

Work Study (Practitioners)—4-week Courses

Concentrated Practical Course for Training Work Study Specialists.
No. 1 Commences 14th April, 1958.

Business Administration (Technical Sales)—4-week Courses

These Courses are intended for Technical Staff transferred to the Sales side. The Courses will give intensive instruction in Business Administration with particular reference to Sales Organisation and Management.
No. 1 Commences 18th November, 1957.
No. 2 Commences 3rd March, 1958.

Industrial Relations and Work Study for Trade Unionists—4-week Courses

For Trade Union Officials and Shop Stewards. Members for these Courses may be sponsored either by Trade Unions or by Industrial Firms, usually in consultation with Trade Unions.
No. 1 Commences 21st October, 1957.
No. 2 Commences 6th January, 1958.
No. 3 Commences 3rd March, 1958.

Foremanship and Human Relations—10-day Courses

For Foremen and Potential Foremen.
No. 1 Commences 14th April, 1958.

CLASSIFIED ADVERTISEMENTS

SITUATIONS WANTED *(continued)*

MAN OF 27, with the experience of seven years in the forces and two and a half years in management in the biscuit industry, is looking for a post in a department dealing with personnel or welfare. Box No. 142, Personnel Management and Methods, Mercury House, 109-119 Waterloo Road, London, S.E.1.

PERSONNEL MANAGER—Retired Air Vice-Marshal, age 58, with wide Personnel Management experience in industry, seeks employment in London area as Caretaker Personnel Manager in post where accumulated knowledge and experience can be exploited. Pioneer work welcomed. Write:—Box 143, Personnel Management and Methods, Mercury House, 109/119 Waterloo Road, S.E.1.

SITUATIONS VACANT

REQUIRED for firm specialising in industrial trucks and tractors, a female Personnel Officer whose qualifications include expert shorthand and typing and a familiarity with the handling of highly confidential correspondence and documents. In the first instance she will be required to understudy a member of the staff with a view to taking over completely in due course. Write, giving full details of qualifications and experience to:—Box No. 144, Personnel Management and Methods, Mercury House, 109/119, Waterloo Road, S.E.1.

TRAINING OFFICER for Shoe Manufacturing Company required to administer Technical Classes from school-leaving P.T.D.R. to City and Guilds Final standard. Experience of T.W.I., or equivalent, would be advantageous. Salary from £700 according to experience. Pension Scheme. For Application Form apply: Personnel Officer, Somervell Brothers Limited, Kendal.

MISCELLANEOUS

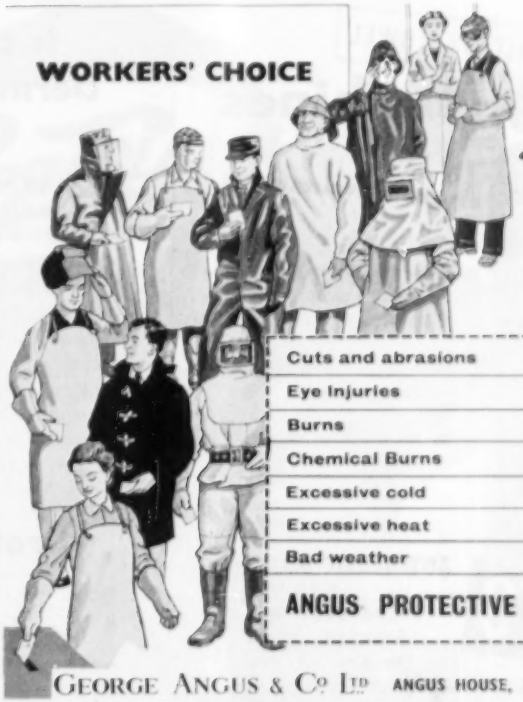
HOLD THEM!—A Rex library becomes an indispensable part of your welfare. Self-supporting, no trouble. Companies whose names are household words have them. For details write:—
Rex Library Service (W),
135a Goswell Road, London E.C.1.
CLE 0351

ADVERTISERS IN
CLASSIFIED AD. COLUMNS

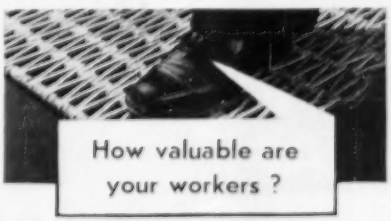
YOU PAY FOR SUCH SERVICE AS THIS WHETHER OR NOT YOU MAKE USE OF IT, AND IT SAVES A LOT OF TIME AND TROUBLE.

Prompt, efficient and experienced attention. All journals. Box numbers. Monthly A/cs. to approved clients. Expert and impartial advice free.

Classified Advt. Dept.:
PRATT & CO. (ADVERTISING) LTD.
11 Albert Square, Manchester
Tel.: Deansgate 5861-3. *Ask for Miss Robinson*
And LONDON. Established 70 years



GEORGE ANGUS & Co LTD ANGUS HOUSE, NEWCASTLE UPON TYNE.



TYPROD
INDUSTRIAL MATS

- TYPROD non-Slip Mats increase safety and reduce standing fatigue.
- Improve hygiene and working conditions.
- Hardwearing and resilient. Guaranteed.
- Available in standard sizes or special sizes and shapes made to order.
- Contractors to the Ministry of Works, Ministry of Supply, British Transport Commission, etc.

We shall be pleased to answer any queries or to quote for special applications. Please refer to Dept. PM.

TYRE PRODUCTS LTD 303 HAPROW ROAD, WEMBLEY, MIDDLESEX
Telephone: Wembley 9555

Peter's SANITARY TOWEL Vending Machines

provide these advantages

- A mechanism that can be adjusted to operate on any number of coins.
- A choice of brands—soluble and non-soluble.
- An assurance of unlimited supply.

Particulars from

PETER'S

AUTOMATIC MACHINES
LIMITED
1 Ladbroke Road
London, W.11
Telephone: PARK 7608

Is the incidence of Dermatitis in Industry declining?

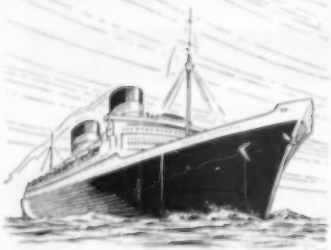
No! In his Annual Report The Chief Inspector of Factories stated that the incidence of dermatitis in industry is not lessening.

Yet dermatitis can be controlled safely and simply by using Rozalex Barrier Creams. Applied before work, Rozalex is effective against almost every known industrial skin irritant and has been accepted as a standard barrier preparation by industry, hospitals, clinics and welfare workers for over 25 years. There is a Rozalex Barrier Cream available for every type of trade. Their full technical resources are at *your* disposal on request to Rozalex Limited, 10 Norfolk Street, Manchester 2.

Protect hands with ROZALEX Barrier Creams

R968

DELCO LIQUID SOAP



FOR YOUR STAFF WASHING FACILITIES

- **ECONOMIC!**
- **HYGIENIC!**
- **ANTISEPTIC!**

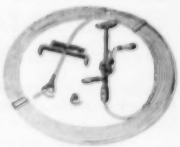
IN A CLASS OF IT'S OWN

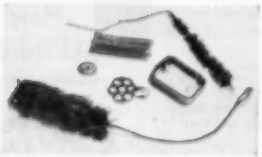
PERFUMED OR UNPERFUMED
HIGH QUALITY — LOW COST

Write for samples and full particulars to:—

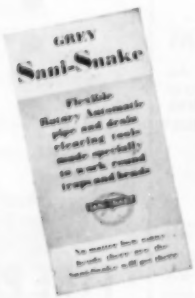
W. M. DELF (LIVERPOOL) Ltd.
DELCO WORKS • RICE LANE • LIVERPOOL, 9

Keep plumbing clear





REMOVED by the "Sani-Snake" after all attempts by other means had failed.



One blocked waste pipe may cost you anything from £10 to over £100 for excavation or dismantling. A "Sani-Snake" will cost you £10 or less and will eliminate the necessity for such costly work. A very large number of famous manufacturing firms and departmental stores are daily using the "Sani-Snake."

The equipment reduces the clearance of pipes to the simple job of turning a handle. Any member of the maintenance staff can use it. There is work for a "Sani-Snake" wherever pipes are in use.

Write for free explanatory illustrated folder and price list.

Licensee and Manufacturer

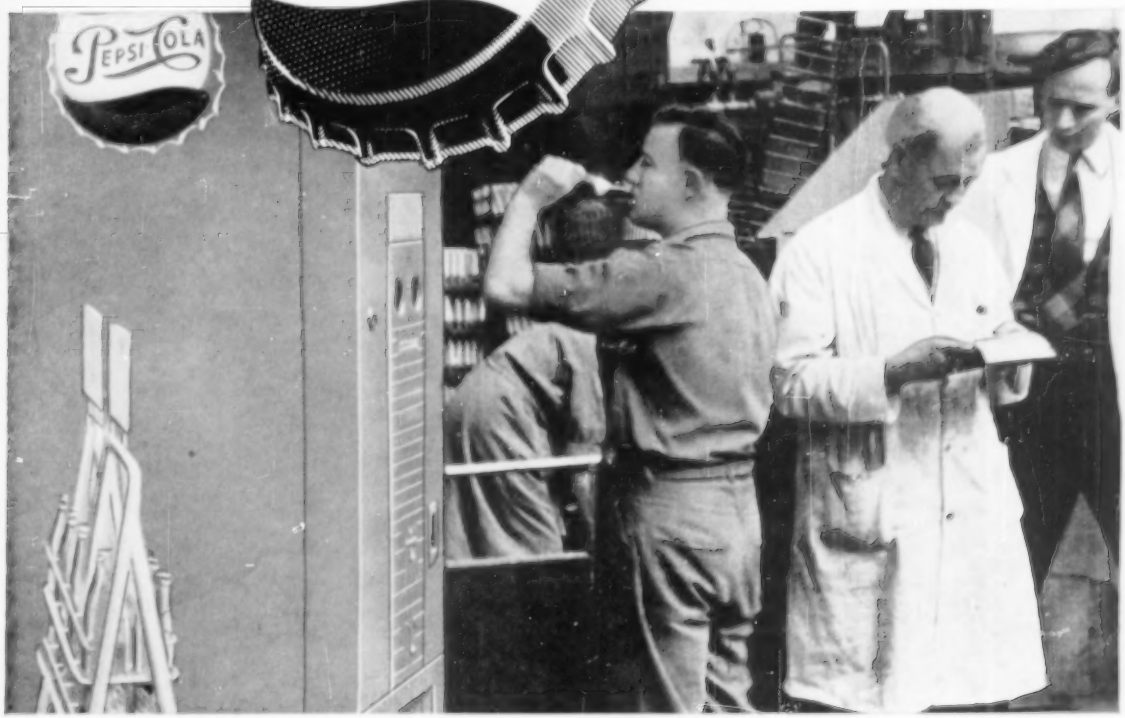
CHARLES C. GREY
20-21 TOTTENHAM MEWS TOTTENHAM ST., LONDON, W.1
Telephone: MUSeum 9145

At the drop of a coin

PEPSI-COLA

TRADE MARK REG.

refreshment plus!



Automatic Pepsi-Cola venders have become a 'must' in factories and offices throughout the country. Why is this? Because Pepsi-Cola venders improve staff relations *and* increase working efficiency. All over England management confirms it. Everyone enjoys Pepsi-Cola — the drink that's more than refreshing, that gives a lift with no later let-down.

* *Saves time by reducing visits to the canteen or washroom.*
* *Improves staff relations. Workers appreciate the convenience of a vender.*
* *Replaces energy quickly. Ice-cold Pepsi-Cola, high in sugar content, really fights fatigue.*
* *Brings in a steady revenue.*

FREE INSTALLATION · FREE MAINTENANCE

Pepsi-Cola venders cost you absolutely nothing.

They're installed and serviced free.

Each vender occupies only 28" x 26" of floor space, and carries 168 ready-chilled bottles.

For further details write or telephone to:

Pepsi-Cola Bottling Co., (London)
46, Standard Road,
London, N.W.10.

ELGar 2511

back to Noise tomorrow

After a quiet weekend's golf, going back to work midst the noise of an office or factory is an unpleasant prospect. The trouble really is *other* people's noises. They merge with the sounds you want to hear, creating an unsuspected strain. Noise can be defeated once and for all—by Cullum, Britain's most experienced acoustic engineers. They'll restore the balance of sounds to a comfortable working level. Call in Cullum immediately.

Sound control by CULLUM

THE ACOUSTIC CONSULTANTS AND CONTRACTORS

Concessionnaires for **ACOUSTI-CELOTEX**

PROGRESS WITH QUIETNESS

HORACE W. CULLUM & CO. LTD. *THE ACOUSTIC CENTRE*

58 Highgate West Hill, London, N.6. FITzroy 1221 (PBX)

Printed for the Proprietors, Shaw Publishing Co. Ltd., *registered office: 180 Fleet Street, London, E.C.4, England (Waterloo 3388)* by Samuel Temple & Co. Ltd., 271b King Street, London, W.6.
Advertisement, editorial and sales offices: Mercury House, 109-117 Waterloo Road, London, S.E.1 (Waterloo 3388).